Appendix G: Cultural Report

CLASS I EXISTING DATA REVIEW OF
HDR ENGINEERING'S CENTRAL UTAH RAILROAD PROJECT,
JUAB, SAN PETE, AND SEVIER COUNTIES, UTAH

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by

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ABSTRACT

A Class 1 existing data review was conducted in January, 2004 by Montgomery Archaeological Consultants (MOAC) for HDR Engineering, Inc. of the proposed Central Utah Rail Project. The proposed rail alignment is approximately 45 miles long and is situated between the existing Union Pacific Railroad (UPRR) line near Juab, Utah and a proposed coal transfer terminal facility near Salina, Utah. MOAC conducted cultural resource file searches to determine the amount and nature of previous archaeological inventories completed and archaeological sites recorded in the area. The purpose of the data review is to assess the possible impacts to archaeological resources of alternate routes for the proposed Central Utah Railway. Data obtained in this report will be utilized in the Environmental Impact Statement (EIS) that is to be prepared by HDR Engineering, Inc. on behalf of the Six County Area of Governments. The existing data review was performed on 36,699 acres, which occurs on lands under private ownership and on lands administered by the Bureau of Land Management and the State of Utah. The total acreage reflects a one-mile wide buffer zone centered on the proposed rail alignments.

The data review indicates 23 cultural resource inventories have been conducted in the project area buffer zone since 1975 (Table 1 and Figure 1). These inventories resulted in the documentation 211 prehistoric and historic archaeological sites. Only 63 of those occur in the current project area. Site types are dominated by prehistoric lithic scatters (n–40), accounting for 64% of the total sites identified (Table 2 and Figure 1). In addition, the following site types were documented: seven lithic scatter/temporary camps (11% of the total), one prehistoric lithic/ceramic scatter (1.5% of the total), one dual component prehistoric lithic scatter/historic trash site(1.5% of the total), six historic trash scatters (9.5% of the total), one historic road (1.5 % of the total), one masonry culvert (1.5% of the total), two historic bridges (3% of the total), three historic canals (5% of the total), and one historic railroad (1.5% of the total).

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INTRODUCTION

In January 2003, a Class 1 existing data review was conducted by Montgomery Archaeological Consultants (MOAC) for HDR Engineering, Inc. of the proposed Central Utah Rail Project. The study was implemented at the request of Ms. Laynee Jones, Deputy Project Manager, and Mr. Rick Black, Environmental Manager, of HDR Engineering's Salt Lake City office. The buffer zone constitutes 36,699 acres of which the majority occurs on lands under private ownership (22, 847 acres); smaller portions of the buffer zone occur on land administered by the Bureau of Land Management (BLM) (8,919 acres), and the State of Utah (4,932 acres).

The objective of the data review was to conduct archival record searches of any previously documented cultural resources within the project area. This data will aid in the assessment of possible impacts to archaeological resources upon development of the Central Utah Rail Project. Data obtained in this report will be utilized in the Environmental Impact Statement (EIS) prepared by HDR Engineering, Inc. This project was carried out in compliance with Federal and State legislation including the Antiquities Act of 1906, the National Historic Preservation Act (NHPA) of 1966 (as amended), the National Environmental and Historic Preservation Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, and the American Indian Religious Freedom Act of 1978.

Record searches were conducted at the State Historic Preservation Office, Salt Lake City on December 29, 2003 by Keith Montgomery (Principal Investigator) and by Ms. Marty Thomas of SHPO, on January 22, 2004. The inventory was conducted under the auspices of U.S.D.I. (FLPMA) Permit No. 03-UT-60122.

DESCRIPTION OF PROJECT AREA

The Central Utah Rail project involves the construction and operation of approximately 45 miles of new rail line connecting the existing Union Pacific Railroad (UPRR) line near Juab, Utah to a proposed coal transfer terminal facility near Salina, Utah. The Six County Association of Governments (SCAOG) conducted a feasability study that considered a range of rail corridor alignments. Subsequent analysis and consultations with interested parties and tribal representatives yielded a result of three alternative corridor alignments (Preferred Route, Alternative B, and Alternative C) being identified and recommended for further study in an Environmental Impact Statement (EIS). The legal description of the preferred route is Township 15 South, Range 1 West, Sections 9, 16, 21, 28, and 33; Township 16 South, Range 1 West, Sections 4, 5, 8, 17, 20, 29, and 32; Township 17 South, Range 1 West, Sections 4, 5, 9, 15, 16, 21, 22, 28, 33, and 34; Township 18 South, Range 1 West, Sections 3, 10, 15, 22, 27, and 34; Township 19 South, Range 1 West, Sections 4, 9, 16, 21, 27, 28, and 34; Township 20 South, Range 1 West, Sections 2, 3, 11, 14, 23, 26, and 35; Township 21 South, Range 1 West, Sections 2, 11, 14, 23, 26, 27, and 34; and Township 22 South, Range 1 West, Section 3. The legal description of Alternate B is Township 20 South, Range 1 West, Sections 23, 26, 27, and 34; Township 21 South, Range 1 West, Sections 3, 9, 10, 16, 21, 28, 33, and 34; and Township 22 South, Range 1 West, Section 3. At Township 20 South, Range 1 West, Section 23, the two routes merge and continue northward as the preferred route. The legal description of Alternative C is Township 21S, Range 1 West, Sections 4,9,16,20, and 21; Township 20 South, Range 1 West, Sections 3, 10, 15, 22, 27, and 34; and it joins the Preferred Route at Township 19 South, Range 1 West, Section 34.

Environmental Setting

The project area lies within the Sanpete Sevier Valley and Gunnison Plateau Valley Mountains physiographic units (Stokes 1986). The Sanpete-Sevier Valley Section consists of a narrow depression formed by two rivers, the Sevier and the San Pitch. The streams join near the town of Gunnison, and leave the valley between the Valley Mountains and Gunnison Plateau. Surficial deposits of soil and alluvial fans cover the area of subsidence resulting from faulting, folding, and salt deposit removal from buried Jurassic formations. The Gunnison Plateau-Valley Mountains Section consist of two distinct features. The Valley Mountains include Tertiary Age formations, whereas the Gunnison Plateau is formed of Cretaceous and Jurassic Age deposits that are abruptly cut on the east face and incised by numerous canyons (Stokes 1986). These plateaus and mountains were formed during the Sevier Orogeny, a geologic event that had widespread effect in Utah. It was at this time that a mostly shallow-water marine environment changed to that of a non-marine surrounding. Compressional thrusting worked eastward across Utah, caused by a subduction of an oceanic plate beneath North America's west coast (Hintze 1988). Sevier County is located in the Intermountain Seismic Belt; active displacement occurs from four seismic faults: the Tushar, Hurricane, Sevier, and Elsinore Faults (Bishop 1997).

The Sevier River Basin is approximately 170 miles long and encompasses about 16,000 square miles of central and south-central Utah. Hydraulic studies indicate the average annual stream flow near the Piute-Sevier county line is 137,300 acre feet. Water is diverted for agricultural purposes, and returned to the system, leading to its classification as "one of the most completely consumed rivers in the United States." (Bishop 1997).

The elevation of the project area ranges from 5020 to 5325 ft (1531 to 1623 m) a.s.l.. This elevation places the project area in the Foothill Vegetation Community that falls within the 5,000 to 6,500 ft zone (Wullstein 2004). Plants associated with this community include: box elder, cottonwood, hackberry, juniper, pinyon pine, hawthorn, buffaloberry, sumac, juniper, cliffrose, serviceberry, shadscale, greasewood, oakbrush, Rocky Mountain bee plant, ephedra, wild mint, and astagalus. The USDA Forest Service reports that the Lake Bonneville Section, in which the current project area exists, over time has sustained bison, antelope, desert bighorn sheep, deer, extensive populations of lagomorphs and sage grouse, grizzly bear, wolf, cougar, and coyote (McNab and Avers 1994). Bison, grizzly bear, wolf, and bighorn sheep were extirpated. At present, the faunal assemblage of the area includes antelope, mule deer, cougar, coyotes, bobcats, black-tailed jackrabbits, desert cottontails, pygmy cottontails and isolated populations of sage grouse. In the past, native fishes of Lake Bonneville included least chub, Utah chub, speckled dace, Bonneville cutthroat trout, and Bonneville redside shiner. Most of these species are now threatened with extinction. They are being replaced by introduced species such as rainbow trout, largemouth bass, and mosquito fish.

Cultural Overview

Human occupation in the study area spans 10,000-12,000 years and encompasses four prehistoric cultural temporal units: the Paleoindian, Archaic, Formative, and Late Prehistoric (Paiute and Ute). Historic occupation of the area is extensive and dates back to the mid-1800s. Overviews for the study area can be found in Jennings (1978) and several technical publications that derive from CRM-related projects (Janetski and Holmer 1982; Talbot et al. 1998).

PaleoIndian Stage

The Paleoindian period in the continental United States extends from the end of the Pleistocene (ca. 11,000 YBP) to the early Holocene (7,500 YBP). Environmental conditions during the Pleistocene supported a variety of megafauna including megabison, mammoth, camel, and ground sloth. Excavated kill sites (e.g. Frison 1974, Frison and Bradely1980, Frison and Stanford 1982, Wilmsen 1974) suggest that Paleoindians concentrated on the exploitation of these mammals, although recent studies addressing paleoeconomies in western North America show that the early PaleoIndians were versatile hunter-gatherers, capable of adapting to variations in the availability of food and raw material sources (Frison and Bonichsen 1996; Meltzer 1993). In Utah, three Paleoindian complexes are recognized: Clovis (ca. 11,500-11,000 B.P.), Folsom (ca. 11,000-10,000 B.P.), and Plano (ca. 10,000-7500 B.P.). Despite minor differences in tool kits and tool manufacturing technology, the three complexes share a variety of traits including big game hunting, low population densities, and wide spatial distributions.

Large, fluted projectile points, spurred end scrapers, a blade and core technology, and a reliance upon megafauna, such as mammoths and giant sloths, characterize the Clovis Complex. First identified at Blackwater Draw near Portales, New Mexico, the Clovis complex is now recognized as a widely dispersed cultural tradition spanning much of North America (Anderson and Gillam 2000). In the American Southwest, most Clovis sites, like those in the High Plains, are defined as kill sites on the basis of butchered faunal remains and associated Clovis artifacts (Cordell 1984). Utah Clovis sites, however, generally have no association with animal remains (Schroedl 1991: Figure 6) and are surface sites commonly interpreted as temporary camps.

Diagnostic cultural materials attributed to the Clovis complex have been found in sand dunes along the Sevier River, including a lithic scatter containing a Clovis projectile point (42Jb180) (Copeland and Fike 1988). In western Utah, the Hell'n Moriah Clovis site (42Md1067), a single component retooling station, yielded seven Clovis fluted projectile points, flaked tools, and lithic debitage (Davis, Hurst and Westfall 1994). More recently, an early Paleoindian lithic procurement locality (42Be2126) was investigated from an obsidian source in the Mineral Mountains (Montgomery et al. 2001). Recovered Clovis artifacts included an unfinished projectile point, a graver/scraper, a multiple graver, and a composite spurred scraper.

Like Clovis, Folsom hunters relied on large game, primarily on extinct species of bison (*Bison antiquus*, and *Bison occidentalis*). Folsom assemblages are characterized by Folsom points, having large channel flakes that extend longitudinally two-thirds the length of the point; Midland points, or unfluted Folsom points; backed flake tools; burins; gravers; and a variety of scrapers (Copeland and Fike 1988; Cordell 1984; Frison 1978). The distribution of Folsom sites in Utah is very similar to that of the Clovis period distribution (Schroedl 1991: Figure 6). The Folsom complex is generally dated in Utah to between 9,000 B.C. and 8,300 B.C. The Plano tradition, incorporating several early Holocene Paleoindian complexes, dates from 8,300 B.C. to approximately 7800 B.C.

Archaic Stage

Compared with earlier Paleoindians, Archaic hunters and gatherers in the American Southwest relyied more on smaller game and plant resources (Cordell 1984). In Utah, such trends are noted by several researchers including Horn et al. (1994) and Black and Metcalf (1986). The general warming trend following the end of the Pleistocene and leading up to the Climatic Optimum of the Holocene (ca. 7500 BP) resulted in dramatic changes to the landscape and its flora and

fauna. As global temperatures rose, vegetation zones began to shift in elevation, and xeric vegetation invaded areas previously suitable for more mesic-adapted plant life (Pielou 1992). Changes in climate and vegetation distributions affected animal population densities and distributions. Megafauna associated with the terminal Pleistocene disappeared or were replaced by modern species. Whatever the relationship between Archaic hunter-gatherers and the Paleoindians, their subsistence strategies, economies, and resource acquisition and utilization varied dramatically.

The material culture of the Archaic period includes projectile points smaller than those found at Paleoindian sites; an increased frequency of ground stone implements; perishables (baskets, sandals, split-twig figurines); and pit structure architecture (Horn et al. 1994). Matson (1991) synthesizes data from the Western United States and presents a four-period Archaic sequence: Early (7800 to 4000 B.C.), Middle (4000 to 2000 B.C.), Late (2000 to 1000 B.C.), and Terminal (1000 B.C. to 300 B.C.).

Current understanding of the Archaic stage in Utah comes primarily from cave and rockshelter excavations, which have provided chronological, typological, and subsistence information. Notably, Sudden Shelter in Salina Canyon was employed as a base camp or seasonal habitation probably during the warmer months over a 5,000-year period (Jennings et al.1980). Schroedl (1976) has defined four Archaic stage phases for the northern Colorado Plateau, distinguished by technology, subsistence strategies, and physiography. The earliest phase is the Black Knoll phase (ca. 8300-6200 B.P.), characterized by Pinto projectile points and elevation-based subsistence practices in which large artiodactyla were hunted in the uplands, while wild plant gathering was emphasized at lower elevations (Schroedl 1976:61-62). The Castle Valley phase (ca. 6200-4500 B.P.) is distinguished by a lower aboriginal population on the Colorado Plateau (possibly attributed to a two-stage Altithermal drought); a variety of projectile point styles, including Rocker, Hawken, Sudden Side-notched, Humboldt and McKean; slab-lined fire pits; and an increasing reliance upon grasses and forbs as foodstuffs (Schroedl 1976:63-64). The Green River phase (ca. 4500-3300 B.P.) is marked by the occurrence of Gypsum and San Rafael Side-notched projectile point types and split-twig figurines (Schroedl 1976). In this phase, hunting (especially for mountain sheep) became important, and amaranths were a preferred plant resource. The Dirty Devil phase (ca.3000-1500 B.P.) marks the transition to the Formative stage and is characterized by increased sedentism, the introduction of corn and the bow and arrow, and Gypsum projectile points (Schroedl 1976). From the Elsinore Burial (dated to around 2150 B.P.) just south of Richfield comes the earliest evidence of maize near the study area. It was found in association with a bell-shaped storage pit that served as a burial pit (Wilde et al. 1986).

Formative Stage

Sometime between A.D. 1 and 400, the Formative stage emerges on the northern Colorado Plateau and in portions of the Great Basin. Maize, ceramics, and the bow and arrow were adopted in different spatiotemporal patterns, indicating that these features did not arrive as a complex from the south (Madsen and Simms 1998:260). Characteristics considered diagnostic of this stage are well-documented on either side of the southern Wasatch Plateau, including permanent architecture, plant domestication, and bow and arrow technologies. Several aceramic Late Archaic/Formative stage sites containing early pit structure architecture have been investigated in central Utah, such as Structure 2 at Icicle Bench (Talbot et al. 1997), the Late Archaic Pahvant Park pit structure at North Richfield (Talbot and Richens 1993); and the Confluence Site along Muddy Creek (Gruebel 1998). In terms of subsistence and certain aspects of material culture, it has been postulated that these ancestors of the Fremont resemble the Basketmaker II pattern, although this pattern

postdates the preceramic Anasazi (Berry 1982:33; Gruebel 1998:25). Other Basketmaker II similarities evident in central Utah during this transition include bell-shaped and slab-lined pits, and shallow pit structures, but an actual Basketmaker migration cannot be demonstrated with the existing data (see Janetski 1993:228-241; Spangler 1995:459-460).

By A.D. 700, a ceramic tradition is well-represented at hundreds of sites attributed to the Fremont complex in central Utah. A number of Fremont classification schemes have been postulated in the last 30 years, focused on material culture, settlement patterns, subsistence strategies, and other cultural elements (Amber 1967; Madsen 1979, 1980; Madsen and Lindsay 1977; Madsen and Simms 1998; Marwitt 1970, 1986). Marwitt (1970) defined five Fremont regional variants. Under this scheme, the project area falls within the Sevier Fremont variant (ca. 780 to 1260), characterized by rectangular, square, and circular pit structures with ventilators or crawlway entrances, but without deflectors (Marwit 1970:140). Dominant ceramic types include Sevier Gray and Snake Valley Gray.

Marwitt's taxonomic scheme has been challenged in recent years, most notably by Madsen (1982). Drawing on settlement and subsistence patterns, he divided the Formative stage groups into three cultures. The Great Basin variants, which relied upon the exploitation of marsh or riverine environments, were classified as the Sevier culture. Those living on the Colorado Plateau north of the Colorado River were designated the Fremont culture. Groups that resided in the Uintah Basin were termed an "unnamed Plains-derived culture." Madsen (1982:217) asserts that the Sevier culture's subsistence economy was based on the collection of wild flora and fauna, primarily from marsh environments, and was supplemented by corn agriculture. At Backhoe Village, for example, the excavators concluded that the availability, productivity, and high percentage of pollen on structure floors suggest that wild plant types, particularly cattails, were heavily utilized (Madsen and Lindsay 1977:87). However, bioarchaeological studies of the skeletal remains from Backhoe Village (Coltrain and Stafford 1999:72-73) show that stable carbon isotope values indicate a dietary pattern rich in C4 foods - in particular, maize. High stable carbon isotope values were also found in two Fremont-age individuals recovered from Salina (Salina Sisters burial), suggesting a probable maize-rich diet (Ibid: 65).

In recent years, studies have focused on Fremont behavioral variability, especially in terms of relationships between people using contrasting adaptive strategies (Madsen 1989, Madsen and Simms 1998; Simms 1986). Madsen and Simms (1998:306) suggest that during the early Fremont complex (ca. 1500-1000 B.P), seasonal mobility combined with farming may have been the most common adaptive strategy; however, permanent year-round occupation is evident in specific locales. Habitation sites in geographical areas such as around Utah Lake, the central Sevier Valley, and the Parowan Valley include contemporaneous domiciles, architectural features associated with communal economic cooperation, and evidence of political integration in the form of communal structures (Madsen and Simms 1998).

In central Utah and elsewhere, significant population growth began sometime around A.D. 900, represented by intensification of architecture, population growth, and expanding frontiers. The Fremont complex in the study area is known mainly from excavated villages that include Nephi (Sharrock and Marwitt 1967), Pharo (Marwitt 1968), Snake Rock Village (Aikens 1967), Backhoe (Madsen and Lindsay 1977), Nawthis (Metcalfe and O'Connell 1979), and Clear Creek Canyon (Janetski et al. 1985, 2000; Talbot et al. 1998, 2000). These sites have yielded a variety of semisubterranean structures; surface structures of adobe, stone, or jacal; and storage structures of various types. Storage structures occur both in isolation and associated with habitation structures, usually as aboveground single or double-bin forms, although multiple-room forms are

also evident, as at Nawthis Village (Metcalfe and Heath 1990). Talbot et al. (1997) suggest site layouts in the Sevier River drainage characterized by L-shaped blocks of storage rooms surrounding a pit structure are consistent with Ancestral Pueblo (Anasazi) patterning, which may imply colonists, kinship linkages, or behaviors with direct demographic connections.

Janetski et al. (1985) note that the apparently high population of Fremont in the central Sevier Valley probably represented a supra-community equivalent to that of the Parowan Valley; Fremont occupations are known beneath the historic towns of Monroe, Elsinore, Glenwood, Aurora, Salina, and in Lost Creek Canyon. Permanent habitations such as Five Finger Ridge in Clear Creek Canyon are designated as "villages" and contain contemporaneous habitation structures, architectural features associated with communal economic cooperation, and evidence of political integration in the form of communal structures (Janetski et al. 2000). The settlement pattern in Clear Creek Canyon has been interpreted as one of population aggregation at a single large site (Five Finger Ridge) with a few hamlets or single family homesteads (Radford Roost, Lott's Farm and Icicle Bench, and perhaps the sites at the mouth of Clear Creek), scattered along the watershed (Ibid:375).

Overall, Fremont sites in the region are typically located on or near streams, floodplains, and alluvial fans, suggesting a reliance on both marsh resources and domesticates (Madsen 1980). In contrast, a recent stable isotope study with burials from residential sites outside of the Great Salt Lake Basin shows that sampled Fremont individuals relied on maize as aboriginal farmers at Mesa Verde, Pecos Pueblo, and Grasshopper Pueblo (Coltrain and Stafford 1999). According to Coltrain and Leavitt (2002:475) at Backhoe Village and other Fremont habitation sites lining the Sevier River, maize cultivation was probably favored over riparian resources because it may have invested farmers with status as well as higher returns.

Upland habitation sites such as Nawthis Village (Metcalfe and Heath 1990) and Round Spring (Metcalf et al. 1993) exhibit a different subsistence economy. Nawthis Village, situated at an elevation of 2025 m (6620 ft) along Gooseberry Creek appears to have functioned more as a residential farming base involving the input of both agricultural and wild local resources. The site is also considered a population center, having more than 50 structures grouped such that intra-site spatial organization may have been more complex than the simple spatial isolation of household units (Jones and Metcalf 1981:25).

Interactions between the Ancestral Pueblo cultures and Fremont groups in the study area apparently became quite fluid between A.D. 880 and 1190 (Talbot and Wilde 1989). This is evidenced by the adaption of corrugated pottery styles in the form of indigenous Snake Valley Corrugated and painted designs (e.g. Ivie Creek Black-on-white and Snake Valley Black-on-gray) derived primarily from Pueblo II styles, as well as the occurrence of extra-regional ceramic wares.

After A.D. 1250, classic traits such as one-rod-and-bundle basketry, thin-walled gray pottery, and clay figurines disappeared from the Fremont region. Fremont denouement has been described as "fragmentary," as farming terminated earlier in some areas and persisted in others. According to Lindsay (1986:246), the dated habitation sites in the area suggest fairly early abandonment (Backhoe Village ca. A.D. 1075 and Nawthis ca. A.D. 1150), perhaps because of climatic deterioration. However, more recent information from Five Finger Ridge in Clear Creek Canyon reveals that 19 pit structures clustered in close proximity to each other most likely date between A.D. 1200-1250 and may have been occupied to A.D. 1350. Well-documented droughts in the Southwest around A.D. 1150 and again A.D. 1250-1300 affected the Fremont cultural area, causing a shift in seasonality of moisture and triggering a decline in the growing season (see

Lindsay 1986). Some researchers suggest that the paucity of Fremont sites dating after the early to mid A.D. 1100s may indicate that populations abandoned the Sevier River Valley in favor of closer proximity to upland resources (Janetski et al. 2000). Elsewhere, Simms (1990) asserts that Fremont demise may have been a factor in the spread of the historically known Numic languages into the eastern Great Basin and northern Colorado Plateau about 800 - 1000 B. P. However, in the study area there is no clear evidence for cultural continuity between the prehistoric Fremont culture and the historic Numic speakers. Madsen and Simms (1998:317) postulate that some Fremont farmers may have discontinued agricultural practices (induced by environmental change) and emigrated to places where they were accepted, probably using established kin linages and interactions based on long-standing traditions.

Late Prehistoric/Protohistoric Stage

Following the disappearance of the Fremont from the archaeological record, a largely nomadic hunting and gathering economic strategy resumed. Numic-speaking Southern Paiute and Ute groups were present throughout much of Utah upon the arrival of Europeans. Although the name Paiute was originally applied only to the Southern Paiute, it was extended to additional groups as the exploration of the Great Basin proceeded. Linguistic evidence suggests that a "wavelike" spread of Numic peoples advanced to the north and east across the Great Basin from a southeastern Californian homeland in or near the Owens Valley roughly 1,000 years ago (Bettinger and Baumhoff 1982). Thermoluminescence dating of Numic brownware ceramics from the southeastern Great Basin yields results as early as the A.D. 800s, although the ceramics' presence is not well established until A.D. 1000 (Rhode 1994). By the 1400s, in the eastern Great Basin numerous lowland-lake and marsh-edge sites were occupied by hunter-fisher-gatherers (Promontory Culture) who were focused on wetland and other valley resources (Janetski 1994:176).

Numic occupation in the study area is evidenced by Desert Side-notched projectile points, Southern Paiute Utility Ware ceramics, and distinct perishables. In the vicinity of the study area, several radiocarbon dates have been obtained from Late Prehistoric occupations in Clear Creek Canyon. The North Cedars Cave contained numerous brownware sherds (in mixed deposits), and yielded dates of A.D. 1400s and 1600s (Janetski et al. 2000). An A.D. 1600s date was obtained from a sample at Trail Mountain Shelter, although no diagnostic Late Prehistoric artifacts were found (Ibid 207). Though the Numic-speaking peoples relied primarily on hunting and gathering, they did supplement their subsistence with maize agriculture, much like the late Archaic occupants of the region (Kelly and Fowler 1986). According to some accounts, the Southern Paiute used various land-management techniques, including burning the grasslands to stimulate new growth and deliberately propagating some natural plants to foster soil conservation (Bishop1997:42). Southern Paiute structures consisted of brush shelters, or wickiups, and sun-shades. In the 1850s, many Paiutes began to use canvas or skin tipis, adopting this Plains style of dwelling from their contact with the Utes. Although settlement patterns reflected a mobile society, family groups tended to occupy the same localities within their territory over the course of a year. Often families claimed certain springs as private property (Kelly and Fowler 1986). The major gatherings of the pre-contact period were centered around the pine nut harvest and the spring fish spawning time at such places as Fish Lake (Tom and Holtz 2000:124).

Occupying the study area at the time of European American arrival were the Pah Vent (or Pahvant) Utes. According to Steward (1938:227), the traditional territory of the Pah Vent Utes stretched from "the deserts surrounding Sevier Lake west of the Wasatch Mountains nearly to the Nevada border." Known villages were located near the modern communities of Kanosh, Deseret,

Black Rock, Holden, Lyndyl, and Scipio. Each of these villages denoted the winter headquarters of a division of the band (Steward 1938:227). There were approximately 500 Pah Vent Utes when the Mormons arrived in the 1860s to build Cove Fort (Van Cott 1997:94). Mormon pioneers noted the presence of Indian corn cultivation along a nearby creek bed, indicating that these Utes practiced maize horticulture to some extent. The Mormons' arrival displaced the native peoples from their traditional foraging and camping areas, resulting in starvation and disease which drastically reduced the Paiute population (Holt 1994:409). The Paiutes and Pahvant Utes residing near the project area were led by a leader named Kanosh (1812-1884) who lived at nearby Corn Creek. Another Sevier County band, the Koosharem, are remnants of the Fish Lake Utes and may actually represent a variation of the Ute and the Paiute cultures (Bishop 1997:47). Their ancestral homeland stretched from Richfield to Escalante.

The Utah Paiutes took part in the Treaty of Spanish Fork with the Federal Government in 1865, by which the Pah-Ute bands would relinquish their lands (Kelly and Fowler 1986:387), although it was never ratified by the Senate. In 1927, a Southern Paiute agency was established in Cedar City by the Bureau of Indian Affairs (Holt 1994:409). The Kanosh Paiute reservation was established by Executive Order in 1929, expanded in 1935, and again in 1937, also by Executive Order (Holt 1992:43). The Koosharem Band of Paiutes/Utes was established in 1928 (Grass Valley) and their lands enlarged in 1937. In 1935, several Paiute bands accepted the Wheeler-Howard Indian Reorganization Act (IRA), which advocated tribal self governance and the protection of Indian land rights (Bishop 1997:49). As a result, an additional 320 acres of land was added to the Koosharem Reservation in 1937. Known as the period of "termination," tribal status was removed from the Paiutes in the 1950s by Congress (Public Law 76C), after just one and one-half years of Bureau of Indian Affairs preparation (Holt 1994). As stated by Tom and Holt (2000:150), "the period between 1957 and 1975 was characterized by general neglect on the part of the State of Utah for any but the most basic needs of the Paiutes." In 1980, the Paiute Indian Tribe of Utah Restoration Act restored all federal services and benefits to these groups (Shivwits, Kanosh, Koosharem, and Indian Peak groups) (Kelly and Fowler 1986:392). Four years later, the Bureau of Land Management set aside what has been called "4,470 acres of poor land scattered throughout southwestern Utah" as well as a $2.5 million trust fund from which members can draw interest to facilitate tribal projects and services (Bishop 1997:53). A small portion of this new reservation land is presently occupied by the Kanosh Band.

Historic Era

The first European-Americans in the region were Father Francisco Dominguez and Father Silvestre Velez de Escalante, who in 1776 passed near the Sevier River Valley en route from Santa Fe, New Mexico, to California (Crampton and Madsen 1994). Following this expedition, Spanish traders and trappers entered the region and soon established secondary trail systems in Utah that became known as the "Spanish Trail." By the 1820s, various fur trappers and explorers had traversed Sevier County, including Jedediah Strong Smith, Ewing Young, and William Wolfskill (Bishop 1997:60). During the 1850s, the various branches of the trail were used by government surveyors, most notably, Lt. John W. Gunnison, whose party conducted a survey for the proposed transcontinental railroad through central Utah, including future Sevier County. His party entered the Sevier Valley near Salina, then followed the Sevier River around the north end of the Pahvant Range. On October 26, 1853, Gunnison and half of his men were ambushed and killed by a band of Indians near Sevier Lake (Poll 1978).

Mormon colonization of the area was spurred by the explorations of the Parley P. Pratt party, sent in 1849 by Latter Day Saints (LDS) President Brigham Young to explore Southern Utah for potential settlement sites. Pratt reported the presence of coal near the present location of Salina and acknowledged the rich bottomlands of the Sevier River Valley. Salina was first established around 1864 by families who came from the Sanpete settlements of Moroni and Gunnison (Young n.d. :4). These Mormon pioneers apparently faced the same shortage of

available land and water in Sanpete County that had motivated others to colonize Richfield, Glenwood, and other early settlements in the Sevier River Valley. The first families who homesteaded Salina included Peter Rasmussen, Neils C. Rasmussen, and William Hayward of Moroni (Young n.d.:58). By 1866, approximately 20 families resided in dugouts or log cabins, however, they were forced out of the area due to the outbreak of the Blackhawk War (1865-68). Around 1871, Salina was again occupied by Mormon settlers, moving into the area as a group, with church approval. During this resettlement period, the economy was largely agricultural, but the mining of salt from 1870, and coal from 1890, were important secondary economic factors. The pioneers used sedimentary rock for buildings, walls, and fences, as well as limestone for mortar and whitewash. At Salina, the community built a flour mill in 1882, powered by the waters of Salina Creek. The mining and processing of salt with a refinery established in 1880 near Salina by E.W. Crane (Ibid: 103). Construction of the Sevier Railway (branch of the Rio Grande Western Railway) commenced in 1890 from Thistle, Utah, to the mines near Marysvale, passing through Salina by August 1891. The fertile Sevier River Valley provided agricultural revenue in addition to ore and coal, a mainstay of Rio Grande Western customers. The railroad spurred economic growth in Sevier County, especially in the livestock industry, where in 1896, the county ranked fourth in sheep and ninth in cattle (Ibid: 122-123). Agriculture remained the main economic activity in the area into the 20th century. Livestock was also a primary economic pursuit, growing in importance throughout the century as dairy plants and cheese factories became established in many towns.

METHODOLOGY

Several archival records searches were performed at the State Historic Preservation Office, Salt Lake City in order to determine the quantity and nature of archaeological inventories previously conducted within the project area. Also researched were the number and type of archaeological sites previously documented. First, MOAC personnel added a one-mile wide buffer zone centered on the proposed routes. The purpose of this buffer zone was to obtain a better representation of cultural resources in both the proposed rail corridor and surrounding areas. Record searches conducted by the authors involved plotting project areas and sites onto 7.5 minute USGS maps, as well as creating tables with descriptive information about the previous work (Tables 1 and 2). Lastly, topographic maps were generated in ArcView showing the project area with previous cultural resource inventories and site locations (Figure 1). The existing data review was performed on 36,699 acres (buffer zone) which occur on lands under private ownership

DATA REVIEW RESULTS

The Class 1 data review of the proposed Central Utah Rail Project indicates 23 cultural resource inventories having been conducted in the project area buffer zone since 1975 (Table 1 and Figure 1). These inventories resulted in the documentation 211 prehistoric and historic archaeological sites. Only 63 of those occur in the current project buffer zone (Table 2 and Figure 1). Identified cultural resource inventories and archaeological sites are described in the following text.

Cultural Resource Inventories

In 1975, World-Wide Survey (WWS) conducted an archaeological clearance study of the Utah Power and Light Company Camp Williams to Sigurd Transmission Line Corridor (Bennett 1975; Project No. U-75-WJ-0062). During this reconnaissance-level study, 43 archaeological sites were documented. Two of the sites were in Utah County, four in Juab County, 28 in Sanpete County, and nine in Sevier County. Twenty-one of the documented sites occur in the current proposed project area: 42Sp12 through 42Sp32. Site types were identified as lithic knapping stations (only), lithic knapping stations (camp site), and lithic knapping stations (quarry). These designations were made on the basis of lithic tools present (projectile points and groundstone vs. cores and waste flakes vs. cores and large primary flakes). None of the sites revealed evidence of architectural structures. Because the proposed project was to modify superstructures of existing power poles, with limited earth moving activity, WWS recommended archaeological clearance and that test excavation of a selected number of designated site locations be instituted.

Brigham Young University (BYU) Department of Archaeology and Anthropology was contracted by Utah Power and Light in 1978 to conduct an intensive level survey from the Sigurd sub-station to Camp Williams (Spencer 1978; Project No. U-76-BC-0162). The result of the survey was the identification of 113 archaeological sites and the re-evaluation of the sites previously documented by World-Wide Survey in 1975. Seventy-eight sites occur in Sevier County, 24 sites in Sanpete County, 5 in Juab County, and 6 in Utah County. Seventeen of those sites occur in the current project area: 42Sp48 through 42Sp64. The majority of the newly recorded sites (n=99) were lithic scatters. Spencer states that the previous recommendations concerning mitigation (during the WWS study) are no longer valid due to a change in law and attitude. Hence, mitigation and alternate mitigation recommendations were included in the 1978 report. The majority of the sites were evaluated as having little or no archaeological value (S4 rating), and no further mitigation was proposed. A recommendation to monitor a site during construction (S3 rating) was proposed for 10 sites. One site (42Sp52) was evaluated with an S2 rating: more historical perspective is needed.

Archeological-Environmental Research Corporation (AERC) inventoried the proposed railroad route in Hayes Canyon in 1978 (Norman 1978; project No. U-78-AF-0267). Two sites recorded during that inventory lie within the current project area: 42Sp79 and 42Sp80. Both sites are lithic scatters. Site 42Sp79 was evaluated as not eligible to the NRHP; the eligibility of 42Sp80 was unevaluated. Also in 1978, sites 42Sp84 and 42Sp85 were recorded; both sites occur in the current project area. Consultation of SHPO files yielded site forms completed by Shelley J. Dickey (BLM No. 39-4). A report identifying the proposed project, the archaeological consulting firm, and project number were not available. These sites are lithic scatters that were not evaluated as to eligibility to the NRHP.

In 1985, BYU's Cultural Resource Management Services, Museum of Peoples and Cultures conducted a survey of a Northern Geophysical Seismic Line in the San Pitch Mountains (Billat 1985; Project No. U-85-I8-543). The survey resulted in a finding of no cultural resources. Also in 1985, BYU inventoried the State Canal Bridge replacement project on US-50 near Aurora, finding sites 42Sv2074 and 42Sv2075, both of which occur in the current project area (Wintch 1985a; Project No. U-85-I8-332s,p). These sites are historic trash scatters evaluated as not eligible to the NRHP. That same year, BYU evaluated U.S. 50 from the Millard County line to Salina for Utah Department of Transportation (UDOT) (Wintch 1985b; Project No. U-85-I8-333). Seven sites were documented (42Sv2076 through 42Sv2082). Site types include a prehistoric lithic scatter/historic water control feature (42Sv2076), five historic trash dumps (42Sv2077 through 42Sv2081), and a prehistoric lithic scatter/quarry (42Sv2082). Sites 42Sv2076, 42Sv2077, and 42Sv2082 occur outside of the current project area buffer zone. All of the sites were evaluated as not significant, with the exception of 42Sv2076 which garnered an undetermined significance evaluation with a recommendation to test the site or avoid it.

Additionally in 1985, the Bureau of Land Management (BLM) inventoried the north Yuba burn, finding one isolated artifact (Revitte 1985; Project No. U-85-BL-0179). In 1986, the BLM surveyed the North Yuba fenceline and road, finding no cultural resources (Revitte 1986; Project No. U-85-BL-0180). That same year, BLM conducted a survey of the North Yuba fence, resulting in a finding of no cultural resources (Harmon 1986; Project No. U-86-BL-0200).

The State Division of History Antiquities Section conducted training for the Utah Statewide Archaeological Society (USAS) in 1988, resulting in the recordation of a site that occurs in the current project area: 42Sp200 (IMACS Site Form completed by Rowe and Rowe; BLM No. 39-4). This is a lithic and ceramic scatter evaluated as eligible for inclusion to the NRHP.

In 1989, the BLM surveyed the New South Valley-Denmark boundary fence, finding no archaeological sites (Lindsay 1989; Project No. U-89-BL-543b). Also in 1989, BYU conducted a reconnaissance survey of the Yuba Reservoir, finding sites 42Sp208 through 42Sp213 (Janetski 1989; Project No. U-89-BC-0208b,p). Three of these sites are found in the current project area: two lithic scatters (42Sp211 and 42Sp213), and a lithic scatter/camp (42Sp212). Eligibility status to the NRHP was undetermined on 42Sp211 and was deemed significant (eligible) for sites 42Sp212 and 42Sp213.

BLM inventoried the Aurora City Pipeline Project in 1990, finding no cultural resources (Lindsay 1990; Project No. U-90-BL-0442b).

Nielson Consulting Group in 1991 inventoried the proposed Aurora community wastewater treatment options (Nielson 1991; Project No. U-91-NP-261). Results of the inventory included the revisitation of two archaeological sites and seven historic structures. One of the sites, 42Sp193 Comp. A, is situated in the current buffer zone. It is the historic Denver and Rio Grande Western railroad, evaluated as not significant on the basis that it lacks physical integrity. The revisited segment consists of a railroad bed lacking rails and ties; it is used as an access road and vehicular traffic has impacted the height and width of the bed. The second revisited site is 42Sv2175, the Salina Sisters Burial; it is located outside of the current buffer zone. There is no longer surface evidence of the site that was excavated by BYU in 1988 (Billat and Billat 1988; Project No. U-87-077). The burials were recovered from two cists that range from 0.75 to 1.5 m below modern ground surface. Associated artifacts were limited to a few lithic flakes, ceramic sherds, and botanical remains. The site yielded significant data, and it was recommended that the site be tested for additional data recovery potential should development ensue. The seven historic

structures, located outside of the current buffer zone, include a 1906 era cross wing residence; a 1913 era salt box residence; a 1910 era clapboard "T" frame residence; a 1923 era clapboard four square residence; a 1911 era "T" hall vernacular residence; a 1910 era single story four square cottage; and a 1918 era bungalow residence.

During 1993, the State of Utah, Division of State Lands and Forestry inventoried the SULA 990 proposed lease for irrigation system improvement in southwest Sanpete County (Wintch 1993; Project U-93-UM-648. One historic site was documented, the Piute Canal, that occurs in the current project area. The canal was reportedly built between 1906 and 1916 during construction of the Piute Reservoir to extend the Sevier Valley Canal northward. This northward extension was called the Piute Canal and the documented segment consists of a dirt canal with no control features. The canal exhibits integrity of location and is associated with the history of irrigation development in the region; hence, it was evaluated as eligible to the NRHP.

In 1994, the BLM inventoried the Swedes Fence project area, resulting in a finding of no cultural resources (Harmon 1994a; Project No. U-94-BL-094). Later that year, the BLM surveyed the Lone Cedar Community Pit Expansion, finding no cultural resources (Harmon 1994b; Project No. U-94-BL-672).

Also in 1994, Abajo Archaeology inventoried UDOT's SR-260 Improvement Project in Sevier County, documenting 32 new archaeological sites (Montgomery and Montgomery 1994; Project No. U-94-AS-567). These sites include two prehistoric lithic scatters and 30 historic properties, including 19 standing structures, three earthen canals (including the Piute Canal), three bridges, four rural corrals, and a masonry culvert. Of those, the three historic canals (42Sv2342, 42Sv2343, and 42Sv2344), the two lithic scatters (42Sv2345 and 42Sv2346), the masonry culvert (no site number) and the SR-260 Denmark Bridge (no site number) lie in the current project area. The Denmark Bridge and the three historic canals are evaluated as eligible for inclusion to the NRHP; the masonry culvert and lithic scatters were deemed not significant.

Baseline Data, Inc. conducted an inventory of the proposed Lost Creek Road bridge replacement over the Sevier River in 1994 (Hughes and Nielson; Project No. U-94-BS-610). The Lost Creek Road bridge (no site number) was recorded and was evaluated as eligible to the NRHP. This site is situated in the current project area.

In 1996, the UDOT surveyed the Aurora Stockpile at Junction SR-260 and US 50/6 in Sevier County (Miller 1997; Project No. U-96-Ut-0465). One previously recorded site was revisited (42Sv2078) and one new site was recorded (42Sv2385). Site 42Sv2385, a lithic scatter, lies in the current project area. Site 42Sv2385 was tested for eligibility by excavating five shovel probes and a one meter square unit. No cultural features were found during the testing and the site was recommended not eligible for inclusion to the NRHP.

Kinlani Archaeology, Ltd. surveyed UDOT's proposed Route 28 Yuba Lake turn lanes in 2002 (Stull and Dosh 2002; Project No. U-02-KI-0221). During the survey one new archaeological site was recorded: 42Sp480, a segment of the historic Federal Aid Route 28 located on the east side of the current State Route 28. This site occurs in the current project area. Kinlani evaluated the site as not eligible to the NRHP on the basis that the road does not retain integrity of original construction, and is not associated with persons or events of regional or local importance.

UDOT, in 2003, filed an addendum to its Piute Canal Culvert Replacement project on State Route 260, indicating the revisitation of site 42Sv2344 (the Piute Canal) and the recordation of site 42Sv2607(Miller 2003; Project No. U-03-UT-0161). Site 42Sv2607 is a prehistoric lithic scatter/historic trash dump evaluated as eligible to the NRHP. These sites are located outside of the current project area buffer zone.

Archaeological Sites

Identified cultural resources (n=63) within the one-mile buffer zone of the proposed Central Utah Rail project are dominated by prehistoric lithic scatters (n=40), accounting for 64% of the total sites identified (Table 2 and Figure 1). In addition, the following site types were documented: seven lithic scatter/temporary camps (11% of the total), one prehistoric lithic/ceramic scatter (1.5% of the total), one dual component prehistoric lithic scatter/historic trash site(1.5% of the total), six historic trash scatters (9.5% of the total), one historic road (1.5 % of the total), one masonry culvert (1.5% of the total), two historic bridges (3% of the total), three historic canals (5% of the total), and one historic railroad (1.5% of the total). Figure 1 illustrates that none of the previously recorded sites occur within the proposed alternative rail alignments' 200 to 400 foot-wide right-of-way corridor.

Table 1. Previous Archaeological Investigations Within a One-Mile Buffer of the Proposed Central Utah Rail Project.

State #	Company Name	USGS Quad	Project Name	Findings/Comments
U-75-WJ-0062,bfs	World Wide Survey, LTD.	Saratoga Springs, Soldiers Pass, Santaquin, Skinner Peaks, Hells Kitchen Canyon SW, Hayes Canyon, Redmond Canyon, Aurora, Sigurd	Utah Power and Light Company, Camp Williams - Sigurd Transmission Line Corridor	**42Sp12** lithic scatter, **42Sp13** lithic scatter, **42Sp14** lithic scatter, **42Sp15** lithic scatter, **42Sp16** lithic scatter, **42Sp17** lithic scatter, **42Sp18** lithic scatter/ temporary camp, **42Sp19** lithic scatter/ temporary camp, **42Sp20** lithic scatter, **42Sp21** lithic scatter/ temporary camp, **42Sp22** lithic scatter, **42Sp23** lithic scatter/ temporary camp, **42Sp24** lithic scatter, **42Sp25** lithic scatter/ temporary camp, **42Sp26** lithic scatter, **42Sp27** lithic scatter, **42Sp28** lithic scatter, **42Sp29** lithic scatter, **42Sp30** lithic scatter, **42Sp31** lithic scatter/ temporary camp, **42Sp32** lithic scatter
U-76-BC-0162, br	Brigham Young University	Sigurd, Aurora, Redmond Canyon, Hayes Canyon, Hells Kitchen Canyon, Santaquin, Goshen Valley North, Allens Ranch, Goshen Pass, Saratoga Springs,	Utah Power and Light Company, Camp Williams - Sigurd Transmission Line Corridor	**42Sp48** lithic scatter, **42Sp49** Archaic lithic scatter/ Historic trash scatter, **42Sp50** lithic scatter, **42Sp51** lithic scatter, **42Sp52** Fremont lithic scatter, **42Sp53** lithic scatter, **42Sp54** lithic scatter, **42Sp55** lithic scatter, **42Sp56** lithic scatter, **42Sp57** lithic scatter, **42Sp58** lithic scatter, **42Sp59** lithic scatter, **42Sp60** lithic scatter, **42Sp61** Numic/ Shoshone lithic scatter, **42Sp62** lithic scatter, **42Sp63** lithic scatter, **42Sp64** lithic scatter
U-85-BL-0179b	Bureau of Land Management	Skinner Peaks	North Yuba Burn	No Cultural Resources

State #	Company Name	USGS Quad	Project Name	Findings/Comments
U-85-BL-0180b	Bureau of Land Management	Skinner Peaks	North Yuba Fenceline and Road	No Cultural Resources
U-85-I8-332s,p	Brigham Young University	Aurora	State Canal Bridge Replacement on US 50 near Aurora	42Sv2074 42Sv2075
U-85-I8-333b,p	Brigham Young University (Technical Series 85-33)	Aurora	Millard County Line to Salina, US-50 UDOT Project NS-305(5)	42Sv2076 42Sv2077 42Sv2078 42Sv2079 42Sv2080 42Sv2081
U-85-I8-543b,f,p	Brigham Young University (Technical Series 85-86)	Juab Skinner Peaks Chriss Canyon Wales	One Seismic Line in the San Pitch Mountains	No Cultural Resources
U-86-BL-200b	Bureau of Land Management	Skinner Peaks	North Yuba Fence and Road	No Cultural Resources
U-89-BC-208bp Not plotted	Brigham Young University	Hell's Kitchen Canyon SW	Yuba Reservoir Reconnaissance	**42Sp211** lithic scatter, **42Sp212** lithic scatter/camp, **42Sp213** lithic scatter
U-89-BL-543b	Bureau of Land Management	Redmond Canyon	New South Valley-Denmark Boundary Fence	No Cultural Resources
U-90-BL-442b	Bureau of Land Management	Aurora	Continuation of Aurora City Pipeline Project	No Cultural Resources
U-91-NP-261PS	Nielson Consulting Group	Aurora, Salina	Cultural Resource Inventory of the Proposed Aurora Community Wastewater Treatment Options, Sevier County, Utah	**42Sp193 Comp. A** Historic Denver & Rio Grande Western railroad
U-93-UM-648s	Utah Division of State Lands and Forestry	Hayes Canyon	SULA 990 Inventory	Piute Canal (No site #)
U-94-BL-094b	Bureau of Land Management	Hayes Canyon	Swedes Fence	No Cultural Resources

State #	Company Name	USGS Quad	Project Name	Findings/Comments
U-94-AS-567b,p,s	Abajo Archaeology	Aurora	Cultural Inventory for UDOT's SR-260 Improvement Project, Sevier County, UT	**42Sv2342** Historic canal **42Sv2343** Historic canal **42Sv2344** Historic canal, **42Sv2345** Lithic scatter, **42Sv2346** Lithic scatter, Masonary culvert, Denmark bridge
U-94-BS-610ps	Baseline Data ,Inc.	Aurora	Cultural and Paleontological Resource Inventory of the Lost Creek Road Bridge Replacement	Lost Creek Bridge
U-94-BL-672b	Bureau of Land Management	Redmond Canyon	Lone Cedar Community Pit Expansion	No Cultural Resources
U-96-UT-0465b,s	UDOT- Region 4	Aurora	Cultural Resource Inventory of UDOT's SR-260 and Junction US 50 Stockpile Location near Aurora, Sevier County, Utah	**42Sv2385** Lithic scatter with Historic glass
U-02-KI-0221b,s	Kinlani Archaeology, Ltd.	Hells Kitchen Canyon SW	Cultural and Fossil Resource Survey of the Proposed Route 28 Yuba Lake Turn Lanes Between R.P. 14.93 and R.P. 15.51 near Gunnison, Sanpete County, Utah	**42Sp480** Historic Federal Aid Route 22 Road
U-03-UT-0161b,p,s	UDOT - Region 4	Aurora	Addendum to UDOT's Piute Canal Culvert Replacement, State Route 260, Sevier County, Utah	**42Sv2344** Historic canal, **42Sv2607** Lithic scatter/ Historic trash scatter

State #	Company Name	USGS Quad	Project Name	Findings/Comments
Unknown	Shelley Dickey, Recorder	Hells Kitchen SW	Project Title Unknown	**42Sp84**, **42Sp85**
Unknown	AERC	Hayes Canyon	Proposed Railroad Route in the Hayes Canyon-Sevier River Localities of Sanpete County, Utah	**42Sp79**, **42Sp80** Lithic Scatter
Unknown	Division of State History, Antiquities Section	Hells Kitchen	USAS Certification Program 1988	**42Sp200**

Table 2. Listing of Archaeological Sites found within a one-mile buffer of the proposed Central Utah Rail Project.

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp12	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 22	Unevaluated
42Sp13	Hayes Canyon	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 15	Unevaluated
42Sp14	Hayes Canyon	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 9	Unevaluated
42Sp15	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 9	Unevaluated
42Sp16	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 9	Unevaluated
42Sp17	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 9	Unevaluated
42Sp18	Hells Kitchen SW	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 4	Unevaluated
42Sp19	Hells Kitchen SW	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 4	Unevaluated

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp20	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 4	Unevaluated
42Sp21	Hells Kitchen SW	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 4	Unevaluated
42Sp22	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 33	Unevaluated
42Sp23	Hells Kitchen SW	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 33	Unevaluated
42Sp24	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 33	Unevaluated
42Sp25	Hells Kitchen SW	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T28S, R 1W, Sec. 28	Unevaluated
42Sp26	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 28	Unevaluated
42Sp27	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 28	Unevaluated
42Sp28	Hells Kitchen SW	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T17S, R 1W, Sec. 28	Unevaluated

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp29	Hayes Canyon	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T18S, R 1W, Sec. 28	Unevaluated
42Sp30	Hayes Canyon	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T19S, R 1W, Sec. 16	Unevaluated
42Sp31	Hayes Canyon	Lithic Scatter/ Temporary Camp	World Wide Survey, LTD. U-75-WJ-0062,bfs	T19S, R 1W, Sec. 28	Unevaluated
42Sp32	Hayes Canyon	Lithic Scatter	World Wide Survey, LTD. U-75-WJ-0062,bfs	T19S, R 1W, Sec. 16	Unevaluated
42Sp48	Hayes Canyon	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 33	Unevaluated
42Sp49	Hayes Canyon	Archaic Lithic Scatter/ Historic Trash Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 33	Unevaluated
42Sp50	Hayes Canyon	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 21	Unevaluated
42Sp51	Hayes Canyon	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 16	Unevaluated

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp52	Hayes Canyon	Fremont Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 16	Unevaluated
42Sp53	Hayes Canyon	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 16	Unevaluated
42Sp54	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 9	Unevaluated
42Sp55	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 9	Unevaluated
42Sp56	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T18S, R1W, Sec. 9	Unevaluated
42Sp57	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 28	Unevaluated
42Sp58	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 28	Unevaluated
42Sp59	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 28	Unevaluated
42Sp60	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 28	Unevaluated

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp61	Hells Kitchen SW	Numic/ Shoshone Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 28	Unevaluated
42Sp62	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 33	Unevaluated
42Sp63	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 22	Unevaluated
42Sp64	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-76-BC-0162, br	T17S, R1W, Sec. 16	Unevaluated
42Sp79	Hayes Canyon	Lithic Scatter	AERC; No project No.	T18S, R1W, Sec. 15	Not Eligible
42Sp80	Hayes Canyon	Lithic Scatter	AERC; No project No.	T18S, R1W, Sec. 15	Not Eligible
42Sp84	Hells Kitchen SW	Lithic Scatter	Recorded by Shelley J. Dickey; No Project No.	T17S, R1W, Sec. 9	Eligible
42Sp85	Hells Kitchen SW	Lithic Scatter	Recorded by Shelley J. Dickey; No Project No.	T17S, R1W, Sec. 5	Not Evaluated
42Sp193 Comp. A	Salina, Aurora	Historic Denver & Rio Grande Western Railroad	Nielson Consulting Group U-91-NP-261ps	T21S, R1W, Sec. 13,18,24, 26, 34, & 35 T22S, R1W, Sec. 3,4	Not Eligible

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sp200	Hells Kitchen SW	Lithic/Ceramic Scatter	Division of State History USAS Certification Program	T17S, R1W, Sec. 8	Eligible
42Sp211	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-89-BC-208bp	T18S, R1W, Sec. 4	Undetermined
42Sp212	Hells Kitchen SW	Lithic Scatter/ Camp	Brigham Young University U-89-BC-208bp	T17S, R1W, Sec. 33	Eligible
42Sp213	Hells Kitchen SW	Lithic Scatter	Brigham Young University U-89-BC-208bp	T17S, R1W, Sec. 33	Eligible
42Sp480	Hells Kitchen SW	Historic Federal Aid Route 22 Road	Kinlani Archaeology, Ltd. U-02-KI-0221b,s	T17S, R1W, Sec. 4	Not Eligible
42Sv2074	Aurora	Historic Trash Scatter	U-85-I8-332s,p	T17S, R1W, Sec. 21	Not Eligible
42Sv2075	Aurora	Historic Trash Scatter	U-85-I8-332s,p	T17S, R1W, Sec. 20/21	Not Eligible
42Sv2078 Not plotted	Aurora	Historic Trash Scatter	U-85-I8-333b,p	T21S, R1W, Sec. 20	Not Eligible
42Sv2079	Aurora	Historic Trash Scatter	U-85-I8-333b,p	T21S, R1W, Sec. 20	Not Eligible

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
42Sv2080	Aurora	Historic Trash Scatter	U-85-I8-333b,p	T21S, R1W, Sec. 20	Not Eligible
42Sv2081	Aurora	Historic Trash Scatter	U-85-I8-333b,p	T21S, R1W, Sec. 20	Not Eligible
42Sv2342	Aurora	Historic Rocky Ford Canal	Abajo Archaeology U-94-AS-567b,p,s	T22S, R1W, Sec. 5 & 8	Eligible
42Sv2343	Aurora	Historic Vermillion Canal	Abajo Archaeology U-94-AS-567b,p,s	T 22S, R1W, Sec. 5 & 32	Eligible
42Sv2344	Aurora	Historic Piute Canal	Abajo Archaeology U-94-AS-567b,p,s	T21S, R1W, Sec. 29	Eligible
42Sv2345	Aurora	Lithic Scatter	Abajo Archaeology U-94-AS-567b,p,s	T21S, R1W, Sec. 29	Not Eligible
42Sv2346	Aurora	Lithic Scatter	Abajo Archaeology U-94-AS-567b,p,s	T21S, R1W, Sec. 20	Not Eligible
42Sv2385	Aurora	Lithic Scatter with Historic Glass and Ceramics	UDOT- Region 4 U-96-UT-0465b,s	T21S, R1W, Sec. 20	Not Eligible
Piute Canal (42Sv2344)	Hayes Canyon	Historic Canal	Utah Division of State Lands and Forestry U-93-UM-648s	T19S, R1W, Sec. 27, 28, 21,16, & 9	Eligible

Site Number	USGS Quad	Site Type Affiliation	Project	Legal Description/ Location in Project Area	National Register of Historic Places Assessment
Lost Creek Bridge	Aurora	Historic Bridge	Baseline Data ,Inc. U-94-BS-610ps	T22S, R1W, Sec. 3	Eligible
SR-260 Denmark Bridge	Aurora	Historic Bridge	Abajo Archaeology U-94-AS-567b,p,s	T21S, R1W, Sec. 20	Eligible
None (Masonary Culvert)	Aurora	Masonary Culvert	Abajo Archaeology U-94-AS-567b,p,s	T21S, R1W, Sec. 29	Not Eligible

DISCUSSION

This Class 1 existing data review is useful in assessing the potential impact to archaeological sites upon development of the proposed project. Objectives of the inventory included identifying cultural resources in the buffer zone, calculating site density, and determining distribution of site types. In addition, it is necessary to conduct an assessment of past archaeological inventories completed in the area in relationship to newer standards and legislation. The majority of inventories meet such professional and legal standards. However, site forms completed prior to 1980 predate the standardized IMACS site forms, and would likely need to be rerecorded during a new archaeological inventory of the area.

Sixty three cultural resource studies have been conducted within the one-mile-wide buffer zone of the Central Utah Rail alignment, resulting in the intensive inventory of approximately 4798 acres, or 13% of the total project area. Scattered throughout the project area buffer zone, these previous investigations have documented 63 archaeological sites, a site density of approximately 1.46 sites per mile. Because inventories have been done mostly in response to clearances required for random individual projects, their findings may not be representative of the Central Utah Rail project area as a whole. Indeed, it is likely that biases have been introduced that relate to access, ruggedness of terrain, elevation, geology, and other factors. However, given the available information, we can anticipate that site density within the project area will likely range from 1 to 3 sites/square mile.

Site Type

Prehistoric sites within the project buffer zone have included lithic scatters, combined lithic scatters and temporary camps, and lithic/ceramic scatters. Dual component sites include prehistoric lithic scatters/historic trash scatters and prehistoric lithic scatter/historic water control feature. Historic site types include trash scatters, a segment of the Denver and Rio Grande Western Railroad, a masonry culvert, three canals, and two bridges. None of the sites occur within the 200 to 400 ft wide proposed rail alignment corridor.

Site documentation suggests that the prehistoric campsites and lithic and/or ceramic scatters are reflective of broad temporal use of the area, but probably on an occasional and temporary basis. Diagnostic artifacts associated with specific cultural groups are few, but they indicate Archaic, Fremont, and Numic (Ute) visitation. A number of the historic sites (camps, trash scatters, etc.) also suggest use of the area that was mostly sporadic and temporary, although several canals and road segments are testimony to the Euro-American settlement of the area and the eventual permanence of human occupation.

Site Location

Obviously any analysis of site location relative to the environment is limited to those areas where investigations have occurred. A review of previous archaeological investigations indicates that prehistoric sites are generally found on low ridges or knolls, or on benches above the Sevier River floodplain. Temporally diagnostic artifacts at these sites suggest occupation during the Archaic, Formative (Fremont), and Numic (Ute) cultural stages. As stated in the cultural overview section of this document, regional investigations indicate that Formative Stage Fremont sites in the

region are typically located on or near streams, floodplains, and alluvial fans, suggesting a reliance on both marsh resources and domesticates (Madsen 1980). According to Coltrain and Leavitt (2002:475) at Backhoe Village and other Fremont habitation sites lining the Sevier River, maize cultivation was probably favored over riparian resources because it may have invested farmers with status and higher returns.

Historic sites are dominated by trash scatters that tend to be found on terraces near washes and arroyos and are often associated with roads. Other historic sites consist of canals, a culvert, and a bridge that are all obviously located along washes, streams, and rivers. The historic road and railroad are found in the valley bottoms.

NRHP Eligibility

Of the 63 total archaeological sites identified, 9 have been recommended eligible to the National Register of Historic Places (NRHP). Eligible sites (14% of the total) include prehistoric lithic scatters (42Sp84, 42Sp212, 42Sp213), a prehistoric lithic/ceramic scatter (42Sp200), the historic Rocky Ford Canal 42Sv2342), the historic Vermillion Canal 42Sv2343), the historic Piute Canal (42Sv2344), the historic Lost Creek Bridge (no site #), and the historic SR-260 Denmark Bridge (no site #). Thirteen identified archaeological sites (21% of the total) are recommended not eligible to the NRHP, because they do not qualify under any of the national register criteria. These include: 42Sv2074, 42Sv2075,42Sv2078, 42Sv2079, 42Sv2080, 42Sv2081, 42Sv2345, 42Sv2346, 42Sv2385, 42Sp193 Comp A, 42Sp79, 42Sp 480 and a historic masonry culvert (no site #). The remaining sites (65% of the total), many of which were recorded nearly thirty years ago, were not evaluated or were rated according to their potential to yield research data through additional testing. It is anticipated that sensitive sites, those which would likely be recommended NRHP eligible, would be located in deposition exhibiting potential for additional buried cultural remains, or those possessing features with potential for yielding samples useful in addressing regional research domains..

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CULTURAL RESOURCE INVENTORY OF
THE CENTRAL UTAH RAILROAD PROJECT
IN SEVIER, SANPETE AND JUAB COUNTIES, UTAH

FINAL

Angela Whitfield

CULTURAL RESOURCE INVENTORY OF
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FINAL

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and

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State of Utah Antiquities Project (Survey)
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ABSTRACT

From April to July 2005 Montgomery Archaeological Consultants, Inc. (MOAC) conducted a cultural resource inventory for HDR Engineering, Inc. of the proposed Central Utah Rail Project. The proposed rail alignment is approximately 45 miles long and is situated between the existing Union Pacific Railroad (UPRR) line near Juab, Utah and a proposed coal transfer terminal facility near Salina, Utah. An alternate route (Alternate C) consisting of 14 miles was also inventoried. The inventory corridor constitutes 1773 acres, with 255 acres occurring on land administered by the Bureau of Land Management (BLM), 425 acres on land administered by the State of Utah School and Institutional Trust Lands Administration (SITLA), and 1093 on privately owned land.

The inventory of the Central Utah Railroad corridor resulted in documentation of 47 new archaeological sites, re-documentation of seven previously recorded sites, visitation (no re-documentation) of one previously recorded site, and twelve isolated finds of artifacts. Prehistoric sites include 22 lithic scatters (42Sv2737, 42Sv2746, 42Sv2749 through 42Sv2751, 42Sp570, 42Sp571, 42Sp573, 42Sp581, 42Sp584, 42Sp588, 42Sp593, 42Sp596, 42Sp598, 42Sp603, 42Sp604, 42Jb1396 through 42Jb1400), ten temporary camps (42Sp18, 42Sp19, 42Sp213, 42585, 42Sp586, 42Sp587, 42Sp589 through 42Sp592), and one possible habitation site (42Sp594). Historic site types include four canals (42Sv2342, 42Sp2343, 42Sv2744, and the Piute Canal designated 42Sv2344 in Sevier County and 42Sp572 in Sanpete County), two farmsteads (42Sv2738 and 42Sv2747), two railroad segments (42Sv2502 and 42Jb1041), two corrals (42Sv2740 and 42Sv2743), two hay derricks (42Sv2741 and 42Sv2742), one concentration of abandoned farm equipment (42Sv2748), five trash scatters (42Sv2752, 42Sp575, 42Sp579, 42Sp580, and 42Sp583), and a series of dismantled utility poles (42Sp582).

Twenty five prehistoric sites are evaluated as eligible to the National Register of Historic Places under Criterion D. These include fifteen lithic scatters (42Sv2739, 42Sp570, 42Sp571, 42Sp573, 42Sp584, 42Sp588, 42Sp592, 42Sp593, 42Sp596, 42Sp598, 42Sp604, 42Jb1396, 42Jb1397, 42Jb1399 and 42Jb1400), nine temporary camps (42Sp18, 42Sp19, 42Sp213, Sp585, Sp586, Sp587, Sp589 through Sp591), and one habitation site (42Sp594). Most of the prehistoric sites exhibit various stages of lithic reduction and stone tool production. Several sites contain diagnostic artifacts such as Rose Spring, McKean, Elko, and Humboldt projectile points indicating Archaic, Fremont, and Late Prehistoric occupation of the area. The temporary camps also contain one or more features, including hearths, fire-cracked rock concentrations, and rock alignments. These sites have potential for yielding information about chronology, subsistence strategies, spatial patterning, settlement patterns, and technology. Eight historic sites are recommended as eligible to the NRHP under Criteria A and D. Four of the sites are canals that are significant to the history of farming and subsistence activities in the area. These canals have all been previously recorded and include the Rocky Ford Canal (42Sv2342), the Vermillion Canal (42Sv2343), and the Piute Canal (42Sv2344 and 42Sp572). Two of the eligible historic sites are farmsteads (42Sv2738 and 42Sv2747) that exhibit potential for additional buried cultural materials and therefore are eligible under Criterion D. The UPRR (42Jb1041) and Denver and Rio Grande Western Railroad (42Sv2502) are significant to the economic development of the region and are recommended as eligible to the NRHP under Criterion A. In addition, two dual component sites (42Sp595 and 42Sp597) were also evaluated as eligible to the NRHP under Criterion D because their prehistoric components exhibit spatial patterning, depth potential and/or diagnostic tools.

Twenty sites are evaluated as not eligible to the NRHP. These include eight lithic scatters that contain a limited class of artifacts, no features, and little potential for additional buried cultural materials. Twelve ineligible historic sites include two corrals, two hay derricks, the Little Ditch canal, one concentration of abandoned farm equipment, five trash scatters and a series of dismantled utility poles. These sites retain little structural integrity and/or little potential for providing significant information on the history of the region.

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INTRODUCTION

From April to July 2005 Montgomery Archaeological Consultants, Inc. (MOAC) conducted a cultural resource inventory for HDR Engineering, Inc. of the proposed Central Utah Rail Project. The proposed rail alignment is approximately 45 miles long and is situated between the existing Union Pacific Railroad (UPRR) line near Juab, Utah and a proposed coal transfer terminal facility near Salina, Utah. An alternate route (Alternate C), beginning at the southern end of the project area and extending north approximately 14 miles, was also inventoried. In January 2004, MOAC performed an existing Class I data review to determine the amount and nature of previous archaeological inventories completed and archaeological sites recorded in the area (Kinnear-Ferris, Wilson, and Montgomery 2004). The current inventory was implemented at the request of Ms. Laynee Jones, Deputy Project Manager, and Mr. Rick Black, Environmental Manager, of HDR Engineering's Salt Lake City office. The inventory corridor constitutes 1773 acres, with 255 acres occurring on land administered by the Bureau of Land Management (BLM) Richfield Field Office, 425 acres on land administered by the State of Utah School and Institutional Trust Lands Administration (SITLA), and 1093 on privately owned land.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to comply with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventories were implemented to attain compliance with a number of federal and state mandates, including the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978 (AIRFA) and Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed by Angela Whitfield (Project Supervisor), Andre Jendresen, Abigail Varner, Roger Stash, Melissa Elkins, Mark Beeson, Meg Thornton, and Patricia Stavish from April through May 2005 and July 6-15, 2005. The project was completed under the auspices of the United States Department of the Interior (Federal Land Policy and Management Act of 1906) Permit No. 05-UT-60122, and State of Utah Antiquities Permit (Survey) No. U-05-MQ-0241bps issued to MOAC, Moab, Utah.

In January 2004, MOAC performed an existing Class I data review to determine the amount and nature of previous archaeological inventories completed and archaeological sites recorded in the area (Kinnear-Ferris, Wilson, and Montgomery 2004). The data review covered a one mile buffer zone centered on the proposed railroad route. The purpose of this buffer zone was to obtain a representation of cultural resources in both the proposed rail corridor and surrounding areas. The data review indicated that 23 cultural resource inventories have been conducted in the project area buffer zone since 1975, resulting in documentation of 211 prehistoric and historic sites. Site types include prehistoric lithic scatters (the dominant site type), lithic scatter/temporary camps, one prehistoric lithic/ceramic scatter, one dual component prehistoric lithic scatter/historic trash scatter, six historic trash scatters, one historic road, one masonry culvert, two historic bridges, three historic canals, and one historic railroad. During the current inventory, eight previously recorded sites (42Sv2342, 42Sv2343, 42Sv2344, 42Sv2502, 42Sp18, 42Sp19, 42Sp213, and 42Jb1041) were re-visited.

DESCRIPTION OF PROJECT AREA

The project area is located in Sevier Valley and Juab Valley in Central Utah. The inventory corridor begins north of Salina, Utah in Sevier County and extends approximately 45 miles north to the existing UPRR line near Juab, Utah. An alternative alignment corridor (Alternate C), beginning at the southern end of the project area and extending north approximately 14 miles, was also inventoried. The legal description of the project area is Township 22 South, Range 1 West, Sect. 3; Township 21 South, Range 1 West, Sects. 33, 34, 26, 27, 28, 21, 23, 14, 16, 9, 11, 2, 3, 4; Township 20 South, Range 1 West, Sects. 34, 35, 26, 27, 22, 23, 14, 15, 10, 11, 2, 3; Township 19 South, Range 1 West, Sects. 34, 27, 28, 21, 22, 15, 16, 9, 10, 4; Township 18 South, Range 1 West, Sects. 33, 34, 27, 22, 15, 10, 3; Township 17 South, Range 1 West, Sects. 34, 27, 28, 21, 22, 15, 16, 9, 4, 5; Township 16 South, Range 1 West, Sects. 32, 29, 20, 17, 8, 9, 4; and Township 15 South, Range 1 West, Sects. 33, 28, 21, 16, and 9 (Figures 1-4).

Environmental Setting

The project area lies within the Sanpete Sevier Valley and Gunnison Plateau Valley Mountains physiographic units (Stokes 1986). The Sanpete-Sevier Valley Section consists of a narrow depression formed by two rivers, the Sevier and the San Pitch. The streams join near the town of Gunnison, and leave the valley between the Valley Mountains and Gunnison Plateau. Surficial deposits of soil and alluvial fans cover the area of subsidence resulting from faulting, folding, and salt deposit removal from buried Jurassic formations. The Gunnison Plateau-Valley Mountains Section consist of two distinct features. The Valley Mountains include Tertiary Age formations, whereas the Gunnison Plateau is formed of Cretaceous and Jurassic Age deposits that are abruptly cut on the east face and incised by numerous canyons (Stokes 1986). These plateaus and mountains were formed during the Sevier Orogeny, a geologic event that had widespread effect in Utah. It was at this time that a mostly shallow-water marine environment changed to that of a non-marine surrounding. Compressional thrusting worked eastward across Utah, caused by a subduction of an oceanic plate beneath North America's west coast (Hintze 1988). Sevier County is located in the Intermountain Seismic Belt; active displacement occurs from four seismic faults: the Tushar, Hurricane, Sevier, and Elsinore Faults (Bishop 1997).

The Sevier River Basin is approximately 170 miles long and encompasses about 16,000 square miles of central and south-central Utah. Hydraulic studies indicate the average annual stream flow near the Piute-Sevier county line is 137,300 acre feet. Water is diverted for agricultural purposes, and returned to the system, leading to its classification as "one of the most completely consumed rivers in the United States" (Bishop 1997).

The elevation of the project area ranges from 5020 to 5325 ft (1531 to 1623 m) asl. This elevation places the project area in the Foothill Vegetation Community that falls within the 5,000 to 6,500 ft zone (Wullstein 2004). Plants associated with this community include: box elder, cottonwood, hackberry, juniper, pinyon pine, hawthorn, buffaloberry, sumac, juniper, cliffrose, serviceberry, shadscale, greasewood, oakbrush, Rocky Mountain bee plant, ephedra, wild mint, and astagalus. The United States Department of Agriculture, Forest Service reports that the Lake Bonneville Section, in which the current project area exists, over time has sustained bison,

antelope, desert bighorn sheep, deer, extensive populations of lagomorphs and sage grouse, grizzly bear, wolf, cougar, and coyote (McNab and Avers 1994). Bison, grizzly bear, wolf, and bighorn sheep were extirpated. At present, the faunal assemblage of the area includes antelope, mule deer, cougar, coyotes, bobcats, black-tailed jackrabbits, desert cottontails, pygmy cottontails and isolated populations of sage grouse. In the past, native fishes of Lake Bonneville included least chub, Utah chub, speckled dace, Bonneville cutthroat trout, and Bonneville redside shiner. Most of these species are now threatened with extinction. They are being replaced by introduced species such as rainbow trout, largemouth bass, and mosquito fish.

Cultural-Historical Overview

Human occupation in the study area spans 10,000-12,000 years and encompasses four prehistoric cultural temporal units: the Paleoindian, Archaic, Formative, and Late Prehistoric (Paiute and Ute). Historic occupation of the area is extensive and dates back to the mid-1800s. Overviews for the study area can be found in Jennings (1978) and several technical publications that derive from CRM-related projects (Janetski and Holmer 1982; Talbot et al. 1998).

The Paleoindian period in the continental United States extends from the end of the Pleistocene (ca. 11,000 B.P.) to the early Holocene (7,500 B.P.). Environmental conditions during the Pleistocene supported a variety of megafauna including megabison, mammoth, camel, and ground sloth. Excavated kill sites (Frison 1974, Frison and Bradley1980, Frison and Stanford 1982) suggest that Paleoindians concentrated on the exploitation of these mammals, although recent studies addressing paleoeconomies in western North America show that the early PaleoIndians were versatile hunter-gatherers, capable of adapting to variations in the availability of food and raw material sources (Frison and Bonichsen 1996; Meltzer 1993). In Utah, three Paleoindian complexes are recognized: Clovis (ca. 11,500-11,000 B.P.), Folsom (ca. 11,000-10,000 B.P.), and Plano (ca. 10,000-7500 B.P.). Despite minor differences in tool kits and tool manufacturing technology, the three complexes share a variety of traits including big game hunting, low population densities, and wide spatial distributions.

Large, fluted projectile points, spurred end scrapers, a blade and core technology, and a reliance upon megafauna, such as mammoths and giant sloths, characterize the Clovis Complex. First identified at Blackwater Draw near Portales, New Mexico, the Clovis complex is now recognized as a widely dispersed cultural tradition spanning much of North America (Anderson and Gillam 2000). In the American Southwest, most Clovis sites, like those in the High Plains, are defined as kill sites on the basis of butchered faunal remains and associated Clovis artifacts (Cordell 1984). Utah Clovis sites, however, generally have no association with animal remains (Schroedl 1991:Figure 6) and are surface sites commonly interpreted as temporary camps. Diagnostic cultural materials attributed to the Clovis complex have been found in sand dunes along the Sevier River, including a lithic scatter containing a Clovis projectile point (42Jb180) (Copeland and Fike 1988). In western Utah, the Hell'n Moriah Clovis site (42Md1067), a single component retooling station, yielded seven Clovis fluted projectile points, flaked tools, and lithic debitage (Davis, Hurst and Westfall 1994). More recently, an early Paleoindian lithic procurement locality (42Be2126) was investigated from an obsidian source in the Mineral Mountains (Montgomery et al. 2001). Recovered Clovis artifacts included an unfinished projectile point, a graver/scraper, a multiple graver, and a composite spurred scraper.

Like Clovis, Folsom hunters relied on large game, primarily on extinct species of bison (*Bison antiquus*, and *Bison occidentalis*). Folsom assemblages are characterized by Folsom points, having large channel flakes that extend longitudinally two-thirds the length of the point; Midland points, or unfluted Folsom points; backed flake tools; burins; gravers; and a variety of scrapers (Copeland and Fike 1988; Cordell 1984; Frison 1978). The distribution of Folsom sites in Utah is very similar to that of the Clovis period distribution (Schroedl 1991: Figure 6). The Folsom complex is generally dated in Utah to between 9,000 B.P. and 8,300 B.P. The Plano tradition, incorporating several early Holocene Paleoindian complexes, dates from 8,300 B.P. to approximately 7800 B.P.

Compared with earlier Paleoindians, Archaic hunters and gatherers in the American Southwest relied more on smaller game and plant resources (Cordell 1984). In Utah, such trends are noted by several researchers including Horn et al. (1994) and Black and Metcalf (1986). The general warming trend following the end of the Pleistocene and leading up to the Climatic Optimum of the Holocene (ca. 7500 B.P.) resulted in dramatic changes to the landscape and its flora and fauna. As global temperatures rose, vegetation zones began to shift in elevation, and xeric vegetation invaded areas previously suitable for more mesic-adapted plant life (Pielou 1992). Changes in climate and vegetation distributions affected animal population densities and distributions. Megafauna associated with the terminal Pleistocene disappeared or were replaced by modern species. Whatever the relationship between Archaic hunter-gatherers and the Paleoindians, their subsistence strategies, economies, and resource acquisition and utilization varied dramatically.

The material culture of the Archaic period includes projectile points smaller than those found at Paleoindian sites; an increased frequency of ground stone implements; perishables (baskets, sandals, split-twig figurines); and pit structure architecture (Horn et al. 1994). Matson (1991) synthesizes data from the Western United States and presents a four-period Archaic sequence: Early (7800 to 4000 B.P.), Middle (4000 to 2000 B.P.), Late (2000 to 1000 B.P.), and Terminal (1000 B.P. to 300 B.P.). Current understanding of the Archaic stage in Utah comes primarily from cave and rockshelter excavations, which have provided chronological, typological, and subsistence information. Notably, Sudden Shelter in Salina Canyon was employed as a base camp or seasonal habitation probably during the warmer months over a 5,000-year period (Jennings et al.1980). Schroedl (1976) has defined four Archaic stage phases for the northern Colorado Plateau, distinguished by technology, subsistence strategies, and physiography. The earliest phase is the Black Knoll phase (ca. 8300-6200 B.P.), characterized by Pinto projectile points and elevation-based subsistence practices in which large artiodactyla were hunted in the uplands, while wild plant gathering was emphasized at lower elevations (Schroedl 1976:61-62). The Castle Valley phase (ca. 6200-4500 B.P.) is distinguished by a lower aboriginal population on the Colorado Plateau (possibly attributed to a two-stage Altithermal drought); a variety of projectile point styles, including Rocker, Hawken, Sudden Side-notched, Humboldt and McKean; slab-lined fire pits; and an increasing reliance upon grasses and forbs as foodstuffs (Schroedl 1976:63-64). The Green River phase (ca. 4500-3300 B.P.) is marked by the occurrence of Gypsum and San Rafael Side-notched projectile point types and split-twig figurines (Schroedl 1976). In this phase, hunting (especially for mountain sheep) became important, and amaranths were a preferred plant resource. The Dirty Devil phase (ca. 3000-1500 B.P.) marks the transition to the Formative stage and is characterized by increased sedentism, the introduction of corn and the bow and arrow, and Gypsum projectile points (Schroedl 1976). From the Elsinore Burial (dated to around 2150 B.P.) just south of Richfield comes the earliest evidence of maize near the study area. It was found in association with a bell-shaped storage pit that served as a burial pit (Wilde et al. 1986).

Sometime between A.D. 1 and 400, the Formative stage emerges on the northern Colorado Plateau and in portions of the Great Basin. Maize, ceramics, and the bow and arrow were adopted

in different spatiotemporal patterns, indicating that these features did not arrive as a complex from the south (Madsen and Simms 1998:260). Characteristics considered diagnostic of this stage are well-documented on either side of the southern Wasatch Plateau, including permanent architecture, plant domestication, and bow and arrow technologies. Several aceramic Late Archaic/Formative stage sites containing early pit structure architecture have been investigated in central Utah, such as Structure 2 at Icicle Bench (Talbot et al. 1997), the Late Archaic Pahvant Park pit structure at North Richfield (Talbot and Richens 1993); and the Confluence Site along Muddy Creek (Gruebel 1998). In terms of subsistence and certain aspects of material culture, it has been postulated that these ancestors of the Fremont resemble the Basketmaker II pattern, although this pattern postdates the preceramic Anasazi (Berry 1982:33; Gruebel 1998:25). Other Basketmaker II similarities evident in central Utah during this transition include bell-shaped and slab-lined pits, and shallow pit structures, but an actual Basketmaker migration cannot be demonstrated with the existing data (Janetski 1993:228-241; Spangler 1995:459-460).

By A.D. 700, a ceramic tradition is well-represented at hundreds of sites attributed to the Fremont complex in central Utah. A number of Fremont classification schemes have been postulated in the last 30 years, focused on material culture, settlement patterns, subsistence strategies, and other cultural elements (Ambler 1967; Madsen 1979, 1980; Madsen and Lindsay 1977; Madsen and Simms 1998; Marwitt 1970, 1986). Marwitt (1970) defined five Fremont regional variants. Under this scheme, the project area falls within the Sevier Fremont variant (ca. 780 to 1260), characterized by rectangular, square, and circular pit structures with ventilators or crawlway entrances, but without deflectors (Marwitt 1970:140). Dominant ceramic types include Sevier Gray and Snake Valley Gray.

Marwitt's taxonomic scheme was challenged during the last quarter century, most notably by Madsen (1982). Drawing on settlement and subsistence patterns, he divided the Formative stage groups into three cultures. The Great Basin variants, which relied upon the exploitation of marsh or riverine environments, were classified as the Sevier culture. Those living on the Colorado Plateau north of the Colorado River were designated the Fremont culture. Groups that resided in the Uintah Basin were termed an "unnamed Plains-derived culture." Madsen (1982:217) asserts that the Sevier culture's subsistence economy was based on the collection of wild flora and fauna, primarily from marsh environments, and was supplemented by corn agriculture. At Backhoe Village, for example, the excavators concluded that the availability, productivity, and high percentage of pollen on structure floors suggest that wild plant types, particularly cattails, were heavily utilized (Madsen and Lindsay 1977:87). However, bioarchaeological studies of the skeletal remains from Backhoe Village (Coltrain and Stafford 1999:72-73) show that stable carbon isotope values indicate a dietary pattern rich in C4 foods - in particular, maize. High stable carbon isotope values were also found in two Fremont-age individuals recovered from Salina (Salina Sisters burial), suggesting a probable maize-rich diet (Ibid: 65).

In recent years, studies have focused on Fremont behavioral variability, especially in terms of relationships between people using contrasting adaptive strategies (Madsen and Simms 1998; Simms 1986). Madsen and Simms (1998:306) suggest that during the early Fremont complex (ca. 1500-1000 B.P), seasonal mobility combined with farming may have been the most common adaptive strategy; however, permanent year-round occupation is evident in specific locales. Habitation sites in geographical areas such as around Utah Lake, the central Sevier Valley, and the Parowan Valley include contemporaneous domiciles, architectural features associated with communal economic cooperation, and evidence of political integration in the form of communal structures (Madsen and Simms 1998).

In central Utah and elsewhere, significant population growth began sometime around A.D. 900, represented by intensification of architecture, population growth, and expanding frontiers. The Fremont complex in the study area is known mainly from excavated villages that include Nephi (Sharrock and Marwitt 1967), Pharo (Marwitt 1968), Snake Rock Village (Aikens 1967), Backhoe (Madsen and Lindsay 1977), Nawthis (Metcalfe and O'Connell 1979), and Clear Creek Canyon (Janetski et al. 1985; Janetski et al. 2000; Talbot et al. 1998, 2000). These sites have yielded a variety of semisubterranean structures; surface structures of adobe, stone, or jacal; and storage structures of various types. Storage structures occur both in isolation and associated with habitation structures, usually as aboveground single or double-bin forms, although multiple-room forms are also evident, as at Nawthis Village (Metcalfe and Heath 1990). Talbot et al. (1997) suggest site layouts in the Sevier River drainage characterized by L-shaped blocks of storage rooms surrounding a pit structure are consistent with Ancestral Pueblo (Anasazi) patterning, which may imply colonists, kinship linkages, or behaviors with direct demographic connections.

Janetski et al. (1985) note that the apparently high population of Fremont in the central Sevier Valley probably represented a supra-community equivalent to that of the Parowan Valley; Fremont occupations are known beneath the historic towns of Monroe, Elsinore, Glenwood, Aurora, Salina, and in Lost Creek Canyon. Permanent habitations such as Five Finger Ridge in Clear Creek Canyon are designated as "villages" and contain contemporaneous habitation structures, architectural features associated with communal economic cooperation, and evidence of political integration in the form of communal structures (Janetski et al. 2000). The settlement pattern in Clear Creek Canyon has been interpreted as one of population aggregation at a single large site (Five Finger Ridge) with a few hamlets or single family homesteads (Radford Roost, Lott's Farm and Icicle Bench, and perhaps the sites at the mouth of Clear Creek), scattered along the watershed (Ibid:375).

Overall, Fremont sites in the region are typically located on or near streams, floodplains, and alluvial fans, suggesting a reliance on both marsh resources and domesticates (Madsen 1980). In contrast, a recent stable isotope study with burials from residential sites outside of the Great Salt Lake Basin shows that sampled Fremont individuals relied on maize as aboriginal farmers at Mesa Verde, Pecos Pueblo, and Grasshopper Pueblo (Coltrain and Stafford 1999). According to Coltrain and Leavitt (2002:475) at Backhoe Village and other Fremont habitation sites lining the Sevier River, maize cultivation was probably favored over riparian resources because it may have invested farmers with status as well as higher returns.

Upland habitation sites such as Nawthis Village (Metcalfe and Heath 1990) and Round Spring (Metcalf et al. 1993) exhibit a different subsistence economy. Nawthis Village, situated at an elevation of 2025 m (6620 ft) along Gooseberry Creek appears to have functioned more as a residential farming base involving the input of both agricultural and wild local resources. The site is also considered a population center, having more than 50 structures grouped such that intra-site spatial organization may have been more complex than the simple spatial isolation of household units (Jones and Metcalf 1981:25).

Interactions between the Ancestral Pueblo cultures and Fremont groups in the study area apparently became quite fluid between A.D. 880 and 1190 (Talbot and Wilde 1989). This is evidenced by the adaption of corrugated pottery styles in the form of indigenous Snake Valley Corrugated and painted designs (e.g. Ivie Creek Black-on-white and Snake Valley Black-on-gray) derived primarily from Pueblo II styles, as well as the occurrence of extra-regional ceramic wares.

After A.D. 1250, classic traits such as one-rod-and-bundle basketry, thin-walled gray pottery, and clay figurines disappeared from the Fremont region. Fremont denouement has been described as "fragmentary," as farming terminated earlier in some areas and persisted in others. According to Lindsay (1986:246), the dated habitation sites in the area suggest fairly early abandonment (Backhoe Village ca. A.D. 1075 and Nawthis ca. A.D. 1150), perhaps because of climatic deterioration. However, more recent information from Five Finger Ridge in Clear Creek Canyon reveals that 19 pit structures clustered in close proximity to each other most likely date between A.D. 1200-1250 and may have been occupied to A.D. 1350. Well-documented droughts in the Southwest around A.D. 1150 and again A.D. 1250-1300 affected the Fremont cultural area, causing a shift in seasonality of moisture and triggering a decline in the growing season (Lindsay 1986). Some researchers suggest that the paucity of Fremont sites dating after the early to mid A.D. 1100s may indicate that populations abandoned the Sevier River Valley in favor of closer proximity to upland resources (Janetski et al. 2000). Elsewhere, Simms (1990) asserts that Fremont demise may have been a factor in the spread of the historically known Numic languages into the eastern Great Basin and northern Colorado Plateau about 800 - 1000 B.P. However, in the study area there is no clear evidence for cultural continuity between the prehistoric Fremont culture and the historic Numic speakers. Madsen and Simms (1998:317) postulate that some Fremont farmers may have discontinued agricultural practices (induced by environmental change) and emigrated to places where they were accepted, probably using established kin linages and interactions based on long-standing traditions.

Following the disappearance of the Fremont from the archaeological record, a largely nomadic hunting and gathering economic strategy resumed. Numic-speaking Southern Paiute and Ute groups were present throughout much of Utah upon the arrival of Europeans. Although the name Paiute was originally applied only to the Southern Paiute, it was extended to additional groups as the exploration of the Great Basin proceeded. Linguistic evidence suggests that a "wavelike" spread of Numic peoples advanced to the north and east across the Great Basin from a southeastern Californian homeland in or near the Owens Valley roughly 1,000 years ago (Bettinger and Baumhoff 1982). Thermoluminescence dating of Numic brownware ceramics from the southeastern Great Basin yields results as early as the A.D. 800s, although the ceramics' presence is not well established until A.D. 1000 (Rhode 1994). By the 1400s, in the eastern Great Basin numerous lowland-lake and marsh-edge sites were occupied by hunter-fisher-gatherers (Promontory Culture) who were focused on wetland and other valley resources (Janetski 1994:176).

Numic occupation in the study area is evidenced by Desert Side-notched projectile points, Southern Paiute Utility Ware ceramics, and distinct perishables. In the vicinity of the study area, several radiocarbon dates have been obtained from Late Prehistoric occupations in Clear Creek Canyon. The North Cedars Cave contained numerous brownware sherds (in mixed deposits), and yielded dates of A.D. 1400s and 1600s (Janetski et al. 2000). An A.D. 1600s date was obtained from a sample at Trail Mountain Shelter, although no diagnostic Late Prehistoric artifacts were found (Ibid 207). Though the Numic-speaking peoples relied primarily on hunting and gathering, they did supplement their subsistence with maize agriculture, much like the late Archaic occupants of the region (Kelly and Fowler 1986). According to some accounts, the Southern Paiute used various land-management techniques, including burning the grasslands to stimulate new growth and deliberately propagating some natural plants to foster soil conservation (Bishop 1997:42). Southern Paiute structures consisted of brush shelters, or wickiups, and sun-shades. In the 1850s, many Paiutes began to use canvas or skin tipis, adopting this Plains style of dwelling from their

contact with the Utes. Although settlement patterns reflected a mobile society, family groups tended to occupy the same localities within their territory over the course of a year. Often families claimed certain springs as private property (Kelly and Fowler 1986). The major gatherings of the pre-contact period were centered around the pine nut harvest and the spring fish spawning time at such places as Fish Lake (Tom and Holt 2000:124).

Occupying the study area at the time of European American arrival were the Pah Vent (or Pahvant) Utes. According to Steward (1938:227), the traditional territory of the Pah Vent Utes stretched from "the deserts surrounding Sevier Lake west of the Wasatch Mountains nearly to the Nevada border." Known villages were located near the modern communities of Kanosh, Deseret, Black Rock, Holden, Lyndyl, and Scipio. Each of these villages denoted the winter headquarters of a division of the band (Steward 1938:227). There were approximately 500 Pah Vent Utes when the Mormons arrived in the 1860s to build Cove Fort (Van Cott 1997:94). Mormon pioneers noted the presence of Indian corn cultivation along a nearby creek bed, indicating that these Utes practiced maize horticulture to some extent. The Mormons' arrival displaced the native peoples from their traditional foraging and camping areas, resulting in starvation and disease which drastically reduced the Paiute population (Holt 1994:409). The Paiutes and Pahvant Utes residing near the project area were led by a leader named Kanosh (1812-1884) who lived at nearby Corn Creek. Another Sevier County band, the Koosharem, are remnants of the Fish Lake Utes and may actually represent a variation of the Ute and the Paiute cultures (Bishop 1997:47). Their ancestral homeland stretched from Richfield to Escalante.

The Utah Paiutes took part in the Treaty of Spanish Fork with the Federal Government in 1865, by which the Pah-Ute bands would relinquish their lands (Kelly and Fowler 1986:387), although it was never ratified by the Senate. In 1927, a Southern Paiute agency was established in Cedar City by the Bureau of Indian Affairs (Holt 1994:409). The Kanosh Paiute reservation was established by Executive Order in 1929, expanded in 1935, and again in 1937, also by Executive Order (Holt 1992:43). The Koosharem Band of Paiutes/Utes was established in 1928 (Grass Valley) and their lands enlarged in 1937. In 1935, several Paiute bands accepted the Wheeler-Howard Indian Reorganization Act (IRA), which advocated tribal self governance and the protection of Indian land rights (Bishop 1997:49). As a result, an additional 320 acres of land was added to the Koosharem Reservation in 1937. Known as the period of "termination," tribal status was removed from the Paiutes in the 1950s by Congress (Public Law 76C), after just one and one-half years of Bureau of Indian Affairs preparation (Holt 1994). As stated by Tom and Holt (2000:150), "the period between 1957 and 1975 was characterized by general neglect on the part of the State of Utah for any but the most basic needs of the Paiutes." In 1980, the Paiute Indian Tribe of Utah Restoration Act restored all federal services and benefits to these groups (Shivwits, Kanosh, Koosharem, and Indian Peak groups) (Kelly and Fowler 1986:392). Four years later, the Bureau of Land Management set aside what has been called "4,470 acres of poor land scattered throughout southwestern Utah" as well as a $2.5 million trust fund from which members can draw interest to facilitate tribal projects and services (Bishop 1997:53). A small portion of this new reservation land is presently occupied by the Kanosh Band.

The first European-Americans in the region were Father Francisco Dominguez and Father Silvestre Velez de Escalante, who in 1776 passed near the Sevier River Valley en route from Santa Fe, New Mexico, to California (Crampton and Madsen 1994). Following this expedition, Spanish traders and trappers entered the region and soon established secondary trail systems in Utah that became known as the "Spanish Trail." By the 1820s, various fur trappers and explorers had traversed Sevier County, including Jedediah Strong Smith, Ewing Young, and William Wolfskill

(Bishop 1997:60). During the 1850s, the various branches of the trail were used by government surveyors, most notably, Lt. John W. Gunnison, whose party conducted a survey for the proposed transcontinental railroad through central Utah, including future Sevier County. His party entered the Sevier Valley near Salina, then followed the Sevier River around the north end of the Pahvant Range. On October 26, 1853, Gunnison and half of his men were ambushed and killed by a band of Indians near Sevier Lake (Poll 1978).

Mormon colonization of the area was spurred by the explorations of the Parley P. Pratt party, sent in 1849 by Latter Day Saints (LDS) President Brigham Young to explore Southern Utah for potential settlement sites. Pratt reported the presence of coal near the present location of Salina and acknowledged the rich bottomlands of the Sevier River Valley. Salina was first established around 1864 by families who came from the Sanpete settlements of Moroni and Gunnison (Young n.d. :4). These Mormon pioneers apparently faced the same shortage of available land and water in Sanpete County that had motivated others to colonize Richfield, Glenwood, and other early settlements in the Sevier River Valley. The first families who homesteaded Salina included Peter Rasmussen, Neils C. Rasmussen, and William Hayward of Moroni (Young n.d.:58). By 1866, approximately 20 families resided in dugouts or log cabins, however, they were forced out of the area due to the outbreak of the Blackhawk War (1865-68). Around 1871, Salina was again occupied by Mormon settlers, moving into the area as a group, with church approval. During this resettlement period, the economy was largely agricultural, but the mining of salt from 1870, and coal from 1890, were important secondary economic factors. The pioneers used sedimentary rock for buildings, walls, and fences, as well as limestone for mortar and whitewash. At Salina, the community built a flour mill in 1882, powered by the waters of Salina Creek. The mining and processing of salt with a refinery established in 1880 near Salina by E.W. Crane (Ibid.:103). Construction of the Sevier Railway (branch of the Rio Grande Western Railway) commenced in 1890 from Thistle, Utah, to the mines near Marysvale, passing through Salina by August 1891. The fertile Sevier River Valley provided agricultural revenue in addition to ore and coal, a mainstay of Rio Grande Western customers. The railroad spurred economic growth in Sevier County, especially in the livestock industry, where in 1896, the county ranked fourth in sheep and ninth in cattle (Ibid.:122-123).

While the Sevier and Juab Valleys were predominantly settled by Mormon pioneers, an experiment in the early twentieth century brought Jewish immigrants to the area. At the turn of the century, the State of Utah was actively advertising for settlers. During the same time period, the Jewish Agricultural and Colonial Association was searching for land in the west on which to organize a colony as part of the "Back to the Land" movement. In 1911, under the leadership of Benjamin Brown, the Association purchased 6,085 acres near Gunnison from the Utah State Board of Land Commissioners (Goldberg 1986). The land was near the Piute Canal, which was to provide much needed irrigation water to the settlement. By 1912, twenty three Jewish families from New York and Philadelphia were farming the land. However, due to the shortage of water, limited growing season, and harsh weather, the success of the colony was short-lived. By 1916, Clarion was no longer an organized community and most families had returned to the east. Several families remained on the land until the 1920's. Today, the few reminders of this Jewish experiment include deteriorating building foundations, two gravestones engraved in Hebrew and English, and a partially collapsed cistern (Hansen 2005). Numerous small headgates that once channeled water from the Piute Canal to agricultural fields of Clarion were encountered during the current inventory (see 42Sp572).

Agriculture remained the main economic activity in the area into the 20th century. Livestock was also a primary economic pursuit, growing in importance throughout the century as dairy plants and cheese factories became established in many towns. In addition to farming and ranching, mining activities provide a valuable means of support for many residents of the area today. Interstate 70, which passes through Sevier County, also generates some economic opportunities as tourists pass through the area on their way to the many attractions in the southern part of the state (Bishop 1997).

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. A 160 foot wide corridor was inventoried along the majority of the proposed rail alignment (80 feet on each side of the corridor center line). Portions of the corridor were inventoried to widths up to 900 feet, in particular in the southern and northern portions of the project area (see Figures 1-4). Ground visibility was considered good. Modern disturbances include livestock grazing, agricultural development, utility lines, and roads. The length of the inventory corridor is approximately 45 miles. An alternative corridor of approximately 14 miles in length was also inventoried. A total of 1773 acres was inventoried, which occur on lands administered by the Bureau of Land Management, School and Institutional Trust Lands Administration, and private property.

Cultural resources were recorded either as archaeological sites or isolated finds of artifacts. An archaeological site was defined as a spatially definable area with features and/or ten or more artifacts. Sites were documented by archaeologists walking transects, spaced no more than 3 meters apart, and marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. At the completion of the surface inspection, a transit was employed to point-provenance diagnostic artifacts and other relevant features in reference to the site datum. Archaeological sites were plotted on a 7.5' United States Geological Survey quadrangle and photographed; site data were entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form. Permanent datums consisting of a rebar and aluminum cap stamped with the site number were placed at the sites. An isolated find was defined as an individual artifact, or light scatter of items, lacking sufficient material culture to warrant an IMACS form, or to derive interpretation of human behavior in a cultural and temporal context. All isolated artifacts were plotted on a 7.5' USGS map and are described in this report.

INVENTORY RESULTS

The inventory of the Central Utah Railroad Project corridor resulted in documentation of 47 new archaeological sites (42Sv2737 through 42Sv2752, 42Sp570 through 42Sp573, 42Sp575, 42Sp579 through 42Sp598, 42Sp603, 42Sp604, and 42Jb1396 through 42Jb1400), re-documentation of seven previously recorded sites (42Sv2342, 42Sv2343, 42Sv2502, 42Sp18, 42Sp19, 42Sp213, and 42Jb1041), visitation (no re-documentation) of one previously recorded site (42Sv2344), and twelve isolated artifact finds (IF-A through IF-L).

Archaeological Sites

Smithsonian Site No.: 42Sv2342 Addendum
Temporary Site No.: MOAC 03-207b-6
Legal Description: T21S, R1W, Secs. 33 and 34
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is the Rocky Ford Canal, which was previously recorded by Abajo Archaeology in 1994 (Montgomery and Montgomery 1994; Project No. U-94-AS-567). It is a 15.6 mile long earthen canal that was constructed in 1872, and is currently in-use. The proposed railroad alignment crosses the canal just west of the town of Redmond. At this location, the canal measures approximately 8 ft across, with an in-situ headgate. The headgate consists of deteriorating concrete bulkheads with 1/4 in metal reinforcements extending from the top of the headgate to the base of the canal. A 17 in diameter pipe extends to the south of the canal. Several wood planks span the top of the headgate, crossing the canal, which contains a significant quantity of water. At this headgate, the water channel drops off at a 90 degree angle, and continues down the canal. Although the canal was originally built in 1872, the concrete headgate may have been built within the last 50 years.

Smithsonian Site No.: 42Sv2343 Addendum
Temporary Site No.: MOAC 03-207b-7
Legal Description: T21S, R1W, Secs. 2 and 28 and T20S, R1W, Sec. 35
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is the Vermillion Canal, which was previously recorded by Abajo Archaeology in 1994 (Montgomery and Montgomery 1994; Project No. U-94-AS-567). It is an approximately 24.2 miles long earthen canal that was constructed around 1878. At the time of this recording, the canal was dry and had a collection of tumbleweeds within its channel. The proposed railroad alignment crosses the canal two times, north and west of the town of Redmond. The canal measures approximately 11 ft (east-west) across its top, and 4 ft deep.

Smithsonian Site No.: 42Sv2344 Addendum
Temporary Site No.: MOAC 03-207b
Legal Description: T21S, R1W, Sec. 21
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is the Piute Canal, a historic earthen canal constructed in 1910. It is 36 miles long and is an extension of the Sevier River Canal. The Piute Canal was originally recorded in 1994 by Abajo Archaeology (Montgomery and Montgomery 1994; Project No. U-94-AS-567). The current inventory corridor crosses the Piute Canal once in Sevier County. Further north, the Piute Canal and several headgates also occur within the inventory corridor (see 42Sp572).

Smithsonian Site No.: 42Sv2502 Addendum
Temporary Site No.: MOAC 03-207b-44
Legal Description: T21S, R1W, Sec. 34
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is the rail bed of the former Denver and Rio Grande Western Railroad. The railroad was originally organized in 1870, and extended from Thistle, UT south to Marysvale, UT. Prior to 1890, the D&RGW absorbed the Sevier Valley Railroad, which completed tracks from Manti to Salina in 1891, and from Salina to Marysvale in 1900. By 1907, all lines had been absorbed under the name D&RGW. The tracks were removed in 1987-1988. The current project corridor crosses the rail bed southwest of Salina, UT, where it parallels US Highway 89. At this point, the rail bed measures approximately 17 ft wide and is covered with gravel.

Smithsonian Site No.: 42Sv2737
Temporary Site No.: MOAC 03-207b-41
Legal Description: T22S, R1W, Sec. 3
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a small, low density lithic scatter located on a slope below a ridge system. The only artifacts present are 11 pieces of lithic debitage (flakes and angular debris). The site appears to be a lithic material testing location. An irrigation/stock pond and plowed field occur to the south and west of the site.

Smithsonian Site No.: 42Sv2738
Temporary Site No.: MOAC 03-207b-42
Legal Description: T21S, R1W, Sec. 34
Land Status: Private and State
NRHP Evaluation: Eligible
Description: The site is an extensive farmstead located in the floodplain on the eastern side of the Sevier River. It consists of two single-room structures, several two-track roads and fences, and two corrals. Historic artifacts are scattered throughout the site area and include sanitary cans, glass fragments, shoe soles, pieces of metal, a crushed metal bucket, 1/8 in screen, and porcelain and ceramic fragments. Modern trash and beer cans are scattered through the site area.

Smithsonian Site No.: 42Sv2739
Temporary Site No.: MOAC 03-207b-1
Legal Description: T21S, R1W, Sec. 23
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a small, dispersed lithic scatter located in a plowed field in the floodplain of the Sevier River. Artifacts include lithic debitage, two cores, and one mano. No diagnostic artifacts were observed on the site. One historic artifact, a sherd of sun-colored amethyst glass, was also noted on site.

Smithsonian Site No.: 42Sv2740
Temporary Site No.: MOAC 03-207b-2
Legal Description: T21S, R1W, Sec. 14
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a large corral area containing two features. Feature A is the corral structural remains. It appears that much of the structure has been disassembled. It contains numerous compartments/enclosures, of which only portions of the walls remain. The entire structure measures approximately 127 ft long (east-west) x 65 ft wide (north-south). Feature B is a man-made depression that contains discarded farm equipment, barbed wire, fencing timbers, and other miscellaneous items. The depression measures 31.5 ft (north-south) x 6 ft (east-west) and is generally oval shaped. Artifacts include a few brown and sun-colored amethyst glass fragments. Farming equipment consists of three axles, barbed wire, fencing timbers, and scrap metal. Also, one prehistoric artifact, a white chert flake fragment, was noted on the site. A more modern corral area occurs just east and adjacent to the site, and is separated from the site by a fence.

Smithsonian Site No.: 42Sv2741
Temporary Site No.: MOAC 03-207b-3
Legal Description: T21S, R1W, Sec. 14
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a hay derrick located in a grassy field surrounded by agricultural land. It is partially collapsed and currently stands approximately 11.75 ft tall. Structures such as these were built by early Mormon farmers to stack loose hay. No artifacts were noted in association with the hay derrick.

Smithsonian Site No.: 42Sv2742
Temporary Site No.: MOAC 03-207b-4
Legal Description: T21S, R1W, Sec. 14
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a hay derrick located in the Sevier River floodplain, in the Sevier Valley. The hay derrick (Feature A) is intact and in good condition. It stands approximately 22.8 ft tall. To the west of the hay derrick is a modern wooden fence measuring 10.4 ft x 10.5 ft x 4 ft tall (Feature B). The fence encloses a wooden box (dimensions: 34 in x 32 in x 22 in) that contains an engine or motor, indicating that at some point in time this hay derrick was motorized. No artifacts were noted in association with the hay derrick.

Smithsonian Site No.: 42Sv2743
Temporary Site No.: MOAC 03-207b-5
Legal Description: T21S, R1W, Sec. 14
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site consists of a large corral and fence (Feature A), a man-made depression (Feature B), an alignment of fence posts (Feature C), and a collapsed wood shelter (Feature D). Artifacts include farming equipment, mostly located within artifact concentrations 1 and 2. Also present are a crushed metal bucket with a handle, an old metal trough, and a crushed metal fuel can. A modern stove is also discarded on the site.

Smithsonian Site No.: 42Sv2744
Temporary Site No.: MOAC 03-207b-45
Legal Description: T21S, R1W, Sec. 2
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a medium-sized irrigation ditch that is designated on the USGS topographic quadrangle map as Little Ditch. It appears to flow into Redmond Lake near Redmond, UT, and merges with the Rocky Ford Canal (42Sv2342) just west of Salina, UT. The portion of the ditch in the project corridor is located south of First Red Knoll. It is an earthen ditch that is 2 to 3 feet wide, with an active water channel. It irrigates the surrounding agricultural fields.

Smithsonian Site No.: 42Sv2746
Temporary Site No.: MOAC 03-207b-C11
Legal Description: T22S, R1W, Sec. 3
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a low density, dispersed lithic scatter located on a small ridge that is part of a larger ridge system, south of the Sevier River. Cultural materials are washing downslope to the south and east, but do not appear to be coming from the ridgetop above the site. Artifacts include lithic debitage and a hammerstone cobble.

Smithsonian Site No.: 42Sv2747
Temporary Site No.: MOAC 03-207b-C12
Legal Description: T22S, R1W, Sect. 3
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a farmstead consisting of a collapsed wood and brick structure (Feature A), a dugout or depression (Feature B), the footing of a small rock and brick structure (Feature D), a concentration of historic farming equipment (Feature F), a collapsed hay derrick (Feature C), and a machine-dug trench (Feature G). The farming equipment in Feature F appears to date to the late 1800s and early 1900s. An "OLIVER" plow is present. The Oliver Farm Equipment Corporation formed in 1929 with the merger of Hart-Parr Tractor Works, Nichols & Shepard, Oliver Chilled Plow Works, and American Seeding Company. The Oliver Farm Equipment Corporation became the Oliver Corporation in 1944. The "JOHN DEERE" plow may date to as early as the mid-1800s.

Smithsonian Site No.: 42Sv2748
Temporary Site No.: MOAC 03-207b-C10
Legal Description: T21S, R1W, Sec. 28
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a concentration of historic farming equipment abandoned at the eastern edge of a field, next to the Vermillion Canal. The equipment is almost completely overgrown with large greasewoods. Machinery includes a MCCORMICK DEERING reaper, a JOHN DEERE plow with a single disc blade on the front, wheels and axle (wheels made of wood with wooden spokes and metal ring around exterior) of an old wagon or sleigh bed, and a large wooden grain drill (60 in long x 29 in diameter) made of many pieces of wood nailed together with a raised strip around each end (appears to be homemade). It is difficult to determine what some pieces of equipment are because they are almost completely obscured by vegetation. Historical accounts of farming activities in the area and the equipment present date the site to the early 1900s. The McCormick Deering reaper would have been manufactured around 1922-1926 by International Harvester Company, Chicago, Illinois. Also discarded near the equipment is a pile of broken concrete slabs, discarded culvert piping and an abandoned 1960s or 1970s Ford F-100 pickup truck.

Smithsonian Site No.: 42Sv2749
Temporary Site No.: MOAC 03-207b-C8
Legal Description: T21S, R1W, Sec. 16
Land Status: State
NRHP Evaluation: Not Eligible
Description: The site is a low density lithic scatter located on a gentle slope between a two-track to the west and the Piute Canal Road to the east. Artifacts are limited 12 pieces of lithic debitage. Site contains abundant naturally-occurring chert chunks and pieces.

Smithsonian Site No.: 42Sv2750
Temporary Site No.: MOAC 03-207b-C9
Legal Description: T21S, R1W, Sec. 9
Land Status: State
NRHP Evaluation: Not Eligible
Description: The site is a small lithic scatter located on the floor of Sevier Valley, on a slightly northeast-trending slope. Artifacts include lithic debitage and three tools. Tool 1 is a Stage V-VI biface fragment of brown and orange chert. It is fractured at the midsection and appears to be the tip of a projectile point. It measures 3 cm x 2.2 cm x .6 cm. Tool 2 is a Stage III biface fragment of gray chert that is fractured lengthwise across the body; and measures 6.5 cm x 3.1 cm x .9 cm. Tool 3 is a small, oval-shaped Stage III biface of white chert with dimensions 5.9 cm x 3.3 cm x 1.5 cm.

Smithsonian Site No.: 42Sv2751
Temporary Site No.: MOAC 03-207b-C1
Legal Description: T21S, R1W, Sec. 9
Land Status: BLM
NRHP Evaluation: Not Eligible
Description: The site is a low density lithic scatter on a low ridge on the west side of Sevier Valley. Dirt roads occur to the south, southeast, and north of the site. Artifacts include debitage and several bifaces. A large amount of naturally-occurring chert is present across the site area. Glass fragments and modern trash were also observed.

Smithsonian Site No.: 42Sv2752
Temporary Site No.: MOAC 03-207b-C3
Legal Description: T20S, R1W, Sec. 27
Land Status: BLM
NRHP Evaluation: Not Eligible
Description: The site is a historic trash dump containing the rusted parts of a bicycle (fork, wheels, frame), tin cans, and glass (including sun-colored amethyst). It is located on the slope of a low ridge, north of a large drainage, in Sevier Valley. Diagnostic artifacts date the site to the early 1900s.

Smithsonian Site No.: 42Sp18 Addendum
Temporary Site No.: MOAC 03-207b-28
Legal Description: T18S, R1W, Sec. 3 and T18S, R1W, Sec. 4
Land Status: State and Private
NRHP Evaluation: Eligible
Description: The site is a prehistoric temporary camp situated on top of a low ridge, west of the Sevier River. The site was originally recorded in 1975 by World-Wide Survey, Ltd. for Utah Power and Light Company. It was re-recorded as site 42Sp211 by Brigham Young University in 1989. The site consists of a high density lithic scatter containing debitage and many tools. Many chert nodules and chunks and groundstone fragments occur throughout the site. An eroding hearth feature (Feature A) is evidenced by abundant fire-cracked rock fragments washing down a drainage in a southeasterly direction. In 1989, the feature was noted to consist of reddened earth, charcoal, and bone; however, only fire-cracked rock was noted during the current visitation. A variety of lithic materials are represented at the site, mostly of chert, including obsidian (some of which is opaque black with brown striations). Many chert chunks, nodules that appear to have been tested, and exhausted cores, suggest that the area was used for material testing and processing. The presence of McKean, Rose Spring and large stemmed projectile points indicates an Archaic and Late Prehistoric occupation for the site. Two large powerline poles and a dirt road cross the western portion of the site area, and a fence line crosses the site to the east. A number of sheep trails also traverse the site. Two count grids were inventoried to provide a sample of lithic materials and stages represented at the site.

Smithsonian Site No.: 42Sp19 Addendum
Temporary Site No.: MOAC 03-207b-29
Legal Description: T18S, R1W, Sec. 3 and 4
Land Status: State and Private
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a high density, dispersed lithic scatter located on a ridge west of the Sevier River. Powerline pole #231 and the powerline road are within the site boundary. The site was originally recorded in 1975 by World-Wide Survey, Ltd. for Utah Power and Light Company (Bennett 1975). Debitage, tools, and fire-cracked rock are located throughout the site. Two lithic concentrations were inventoried to provide a sample of materials and stages represented on the site. The abundance of tested cores and chert chunks suggests the site was used as a material testing and processing area. Modern trash was also observed on the site.

Smithsonian Site No.: 42Sp213 Addendum
Temporary Site No.: MOAC 03-207b-32
Legal Description: T17S, R1W, Secs. 33 and 34
Land Status: State and Private
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a large, dispersed lithic scatter located on the eastern slopes and terrace of a knoll, west of the Sevier River. It was originally recorded in 1989 by Brigham Young University (Janetski 1989). Artifacts include hundreds of pieces of debitage of various materials and one possible Elko Series projectile point, suggesting an Archaic/Fremont affiliation. In 1989, Humboldt (Archaic) and Rose Spring Series projectile points (Formative) were noted on site. Two count grids were inventoried in order to provide a sample of lithic materials and stages represented on the site. The site has been heavily looted judging from the presence of numerous collector's piles, one of which contains 100+ flakes in a pile lined with 8 large rocks. Two fences and many livestock trails traverse the site.

Smithsonian Site No.: 42Sp570
Temporary Site No.: MOAC 03-207b-8
Legal Description: T20S, R1W, Sec. 23
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a medium density, dispersed lithic scatter located on a low ridge in Sevier Valley. Most artifacts occur on the south slope of the ridge. Artifacts include lithic debitage, seven bifaces, and two cores. No diagnostic artifacts were noted at the site.

Smithsonian Site No.: 42Sp571
Temporary Site No.: MOAC 03-207b-9
Legal Description: T20S, R1W, Sec. 14
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a small lithic scatter located on a low ridge. Core reduction activities at the site are indicated by two concentrations of primary flakes of the same materials. Three tools (a core, a cobble hammerstone, and a biface) were noted at the site. No diagnostic artifacts were present.
Smithsonian Site No.: 42Sp572

Temporary Site No.: MOAC 03-207b-37
Legal Description: T20S, R1W, Sec. 27 and T19S, R1W, Sec. 27
Land Status: State, BLM, and Private
NRHP Evaluation: Eligible
Description: The Piute Canal is a historic earthen canal constructed in 1910. It is 36 miles long and is an extension of the Sevier River Canal. During the current project, four headgates adjacent to the canal were documented. In addition, seven small headgates on laterals of the Piute Canal, associated with the historic Jewish community of Clarion, were also documented. Portions of the canal have been previously recorded in Sevier County as site 42Sv2344 (Montgomery and Montgomery 1994; Project No. U-94-AS-567).

Smithsonian Site No.: 42Sp573
Temporary Site No.: MOAC 03-207b-11
Legal Description: T20S, R1W, Sec. 2
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a small lithic scatter located on a gentle, south-facing slope. The site appears to be an area where material testing was carried out, as nine cores along with an abundance of angular debris/shatter was noted. No diagnostic artifacts were present.

Smithsonian Site No.: 42Sp575
Temporary Site No.: MOAC 03-207b-12
Legal Description: T20S, R1W, Sec. 2
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a large dispersed trash scatter located just east of the Piute Canal and adjacent to the Piute Canal Road. Five trash concentrations were noted, and the site appears to represent multiple, separate dumping episodes. Artifacts include hole-in-top cans, sanitary cans, glass fragments, porcelain and ceramic fragments, a green glass marble, barrel hoops, pieces of wire, pieces of wood, tin cans lids, and a metal bucket. Modern trash is also present.

Smithsonian Site No.: 42Sp579
Temporary Site No.: MOAC 03-207b-16
Legal Description: T19S, R1W, Sec. 27
Land Status: State
NRHP Evaluation: Not Eligible
Description: The site is a small, dispersed historic trash scatter located adjacent to a road and on the north side of a large drainage. Artifacts include hole-in-top cans, sanitary food cans, glass fragments, and other discarded household items. The site most likely dates from the early to mid-1900s. Modern trash and shotgun shell casings are also dispersed throughout the site.

Smithsonian Site No.: 42Sp580
Temporary Site No.: MOAC 03-207b-17
Legal Description: T19S, R1W, Sec. 27
Land Status: State and Private
NRHP Evaluation: Not Eligible
Description: The site is a low density can scatter in a shallow drainage between two low slopes. Artifacts include one white porcelain fragment, hole-in-top cans, and sanitary cans. The site most likely dates post-1920.

Smithsonian Site No.: 42Sp581
Temporary Site No.: MOAC 03-207b-18
Legal Description: T19S, R1W, Sec. 27
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a small lithic scatter located on an east/southeast facing slope. Artifacts include lithic debitage, a core, and a biface fragment. No diagnostic artifacts were noted at the site.

Smithsonian Site No.: 42Sp582
Temporary Site No.: MOAC 03-207b-19
Legal Description: T19S, R1W, Sec. 9 and 10; T19S, R1W, Secs. 27 and 28
Land Status: State and Private
NRHP Evaluation: Not Eligible
Description: The site is a series of collapsed or dismantled powerline poles that lie in the Sevier Valley. The powerline was probably constructed to provide power to the small towns in Sevier Valley including Gunnison, Fayette, Manti, and Axtell. Electrical service was not available in these towns until the 1901-1903 time period. It is uncertain when the original powerline poles were dismantled.

Smithsonian Site No.: 42Sp583
Temporary Site No.: MOAC 03-207b-20
Legal Description: T18S, R1W, Sec. 22
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a small isolated trash scatter containing a cushion/box springs, several complete glass bottles, and several crushed cans. Artifacts are located on a large pile of 100+ rocks (Feature A) most likely dragged from a field located downhill to the east of the site. The rocks are of many sizes, from very small to 11 in x 12 in in size, and appear to be limestone, sandstone, and chert nodules. The main concentration of rocks is about 10 ft (northwest-southeast) x 7.5 ft (northeast-southwest). Rocks outside of the concentration are also scattered around the site area. The rocks and most artifacts are located on the south slope of a large drainage, with some cans scattered downhill to the east. Diagnostic artifacts (glass maker's marks and "Punch Here" hole-in-top cans) indicate the site most likely dates between 1930-1950.

Smithsonian Site No.: 42Sp584
Temporary Site No.: MOAC 03-207b-21
Legal Description: T18S, R1W, Sec. 15
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a large dispersed lithic scatter containing 500+ pieces of lithic debitage, numerous tools, and 50+ fire-cracked rock (FCR) fragments scattered throughout the site. Two count grids for lithic debitage were placed near the center of the site, where the density of debitage, FCR, and tools is the greatest. The presence of an Elko Series Corner-Notched projectile point suggests an Archaic or Fremont cultural affiliation for the site. The site has seen much visitation based on the presence of modern beer cans, and shotgun and other shell casings. Many sheep trails also traverse the site.

Smithsonian Site No.: 42Sp585
Temporary Site No.: MOAC 03-207b-22
Legal Description: T18S, R1W, Sec. 15
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a large, dispersed lithic scatter located on the top and slopes of a low ridge west of the Sevier River. Debitage, tools, and FCR are located throughout the site. Most of of the debitage is located in deflated dune areas and trapped at the base of vegetation. Two lithic concentrations were inventoried in order to provide a sample of lithic materials and stages represented on the site. Three features (a deflated hearth and two firecracked rock concentrations) were also present. Numerous collector's piles and rifle and shotgun shell casings are located on the site. Sheep trails also traverse the site.

Smithsonian Site No.: 42Sp586
Temporary Site No.: MOAC 03-207b-M2
Legal Description: T18S, R1W, Sec. 15
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a temporary camp located on the slopes of a small ridge in Sevier Valley. It contains a small lithic scatter, two biface fragments, a core, a hearth feature consisting of dark stained soils and FCR (Feature A), and a concentration of FCR (Feature B). Most artifacts are located on the south slope of the site, and FCR is scattered throughout the site. A crushed, rusted meat can is located near Feature B and sheep trails traverse the site.

Smithsonian Site No.: 42Sp587
Temporary Site No.: MOAC 03-207b-23
Legal Description: T18S, R1W, Sec. 10
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a high density, dispersed lithic scatter located on the south and east slopes of a small ridge on the west side of the Sevier River. Debitage, tools, and FCR are located throughout the site. A thick, brown incised rim sherd and a tiny bead of gray rock were also present. A hearth feature (Feature A) consisting of dark-stained soils and FCR was

identified. Two lithic count grids were inventoried in order to provide a sample of materials and stages represented on the site. The presence of two Elko Series projectile points suggests an Archaic or Fremont cultural affiliation for the site.

Smithsonian Site No.: 42Sp588
Temporary Site No.: MOAC 03-207b-24
Legal Description: T18S, R1W, Sec. 10
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a medium-sized, dispersed lithic scatter located on the eastern slope of a ridge on the west side of the Sevier River. Artifacts include lithic debitage and one core. A few anthills on site also contain a small number of tertiary flakes. FCR was scattered throughout the site and in one concentration (Feature A). Modern shell casings are present on the site.

Smithsonian Site No.: 42Sp589
Temporary Site No.: MOAC 03-207b-25
Legal Description: T18S, R1W, Sec. 10
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a dispersed lithic scatter located on a knoll west of the Sevier River. Debitage, tools, and FCR are located throughout the site. Two lithic concentrations were inventoried to provide a sample of materials and stages represented on the site. One hearth feature containing dark-stained soils and FCR (Feature A) was also present. Most artifacts are located on the top and south slope of the knoll. The presence of a Rose Spring Series corner-notched projectile point suggests a Late Prehistoric occupation for the site. Many sheep trails traverse the site and have dragged artifacts in their path. Shotgun shells and modern beer cans are also located on site.

Smithsonian Site No.: 42Sp590
Temporary Site No.: MOAC 03-207b-M1
Legal Description: T18S, R1W, Sec. 10
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a small temporary camp located on the eastern slope of a low knoll, west of the Sevier River. It contains a small, sparse lithic scatter, two cores, a groundstone fragment, and a biface fragment. The hearth contains dark stained soil and numerous FCR fragments were also noted on site.

Smithsonian Site No.: 42Sp591
Temporary Site No.: MOAC 03-207b-26
Legal Description: T18S, R1W, Sec. 10
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a temporary camp containing a large dispersed lithic scatter located on a ridge top and its slopes, west of the Sevier River. Numerous tools, including cores, bifaces, a groundstone fragment, and utilized flakes, are present on the site. Feature A is a hearth consisting of dark-stained soils and 10-15 small to medium FCR fragments. It measures 65 cm in diameter. Feature B is a hearth feature consisting of dark-stained soils and approximately 20 very small FCR fragments contained within an about 30 cm diameter, located on a slope on the south side of the site. Two lithic concentrations (LC-1 and LC-2) are also present. Several collector's piles and rifle cartridges are located on site.

Smithsonian Site No.: 42Sp592
Temporary Site No.: MOAC 03-207b-27
Legal Description: T18S, R1W, Secs. 3, 9 and 10
Land Status: State and Private
NRHP Evaluation: Eligible
Description: The site is a high density, dispersed lithic scatter located on the top and slopes of a knoll, west of the Sevier Bridge Reservoir. Numerous cores and bifaces are located on the site, and several anthills contain micro-flakes. The presence of Gypsum and Northern Side Notched projectile points indicates an Archaic occupation for the site. Four count grids were inventoried to provide a sample of lithic materials and stages represented. The abundance of chert nodules and chunks throughout the site suggests use of the area as a material testing and processing location. Also noted on the site are a few sun-colored amethyst glass fragments, shotgun and other shell casings, and several collector's piles.

Smithsonian Site No.: 42Sp593
Temporary Site No.: MOAC 03-207b-30
Legal Description: T18S, R1W, Sec. 34
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a small lithic scatter located on the eastern slope of a low knoll in Sevier Valley. Artifacts include approximately 21 pieces of lithic debitage of various cherts. No features or diagnostic artifacts are located on the site. The site exhibits potential for additional buried cultural materials.

Smithsonian Site No.: 42Sp594
Temporary Site No.: MOAC 03-207b-31
Legal Description: T18S, R1W, Sec. 34
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a possible habitation site containing a large, dispersed lithic scatter, 13 tools, and two rock alignments. The site is located along a low finger ridge in Sevier Valley, just northwest of the Sevier River. A midden area contains the greatest density of artifacts, otherwise

the artifacts are dispersed throughout the site. Three count grids (1 m x 1 m units) were inventoried to provide a sample of lithic materials and stages represented on the site. The presence of a possible Rose Spring Series corner-notched projectile point suggests a Late Prehistoric affiliation for the site. The site has likely been collected (one collector's pile observed) judging from the number of tools in proportion to the amount of debitage.

Smithsonian Site No.: 42Sp595
Temporary Site No.: MOAC 03-207b-33
Legal Description: T18S, R1W, Secs. 27, 28 and 33
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a dual component site that includes a prehistoric temporary camp and a historic artifact scatter located on the top and slopes of a low ridge west of the Sevier River. It consists of a very large lithic scatter, several stained soil features, midden areas, numerous groundstone, and lithic tools. The historic component is restricted to the east side of the site and consists of a few can pieces, ceramics, and purple and clear glass fragments. The site is disturbed significantly by modern collecting (beer cans, collector's piles, etc.). Most of the projectile points have likely been collected.

Smithsonian Site No.: 42Sp596
Temporary Site No.: MOAC 03-207b-34
Legal Description: T18S, R1W, Sec. 28
Land Status: State
NRHP Evaluation: Eligible
Description: The site is a moderately dense, dispersed lithic scatter located on a knoll, west of the Sevier River. Artifacts include lithic debitage and seven tools including three bifaces, one core, one re-touched flake, a groundstone fragment, and a mano. Two count grids were inventoried to provide a sample of lithic materials and stages represented. A large number of chert and quartzite nodules occur along the slope of the knoll. Several collector's piles and a fake duck decoy were noted on site.

Smithsonian Site No.: 42Sp597
Temporary Site No.: MOAC 03-207b-35
Legal Description: T18S, R1W, Sec. 4
Land Status: BLM
NRHP Evaluation: Eligible
Description: This is a dispersed, dual component site containing a prehistoric lithic scatter and a historic artifact scatter located on the east and north sides of a knoll, on the east side of the Sevier River. The prehistoric component consists of a lithic scatter containing debitage and seven tools including three bifaces, one small side-notched projectile point, a re-touched flake, a utilized flake, and a flaked cobble. The historic component includes two artifact concentrations containing sanitary cans, hole-in-top cans, and glass fragments and several other items scattered across the site.

Smithsonian Site No.: 42Sp598
Temporary Site No.: MOAC 03-207b-36
Legal Description: T18S, R1W, Sec. 5
Land Status: BLM
NRHP Evaluation: Eligible
Description: The site is a sparse lithic scatter located on a westward draining slope of a ridge perpendicular to a powerline access road that is currently barricaded. Artifacts include lithic debitage and several tools (three cores, one biface fragment, and a mano fragment). Two features were noted at the site. Feature A is a concentration of FCR fragments measuring 180 cm x 120 cm. About 16 fire-blackened sandstone and basalt fragments, small to medium in size, make up the concentration. Feature B is an area of about 70 cm diameter containing dark-stained soils and one very small (3 cm x 2.5 cm) piece of fire-blackened rock. There is also a modern fire ring (cluster of 8-10 large rocks) on site and a sun-colored amethyst glass fragment.

Smithsonian Site No.: 42Sp603
Temporary Site No.: MOAC 03-207b-C6
Legal Description: T20S, R1W, Sec. 10
Land Status: BLM
NRHP Evaluation: Not Eligible
Description: The site is a low density lithic scatter consisting of two loci containing a small number of large white chert flakes. The site is located on a low ridge on the west side of Sevier Valley. No diagnostic artifacts were noted at the site.

Smithsonian Site No.: 42Sp604
Temporary Site No.: MOAC 03-207b-C7
Legal Description: T20S, R1W, Sec. 3
Land Status: BLM
NRHP Evaluation: Eligible
Description: The site is a medium density lithic scatter on a very low ridge on the west side of Sevier Valley. Artifacts are washing downhill, on a gentle south-facing slope, and include lithic debitage and five tools, all bifaces. No temporally diagnostic artifacts were noted at the site.

Smithsonian Site No.: 42Jb1041 Addendum
Temporary Site No.: MOAC 03-207b-48
Legal Description: T15S, R1W, Secs. 9 and 17
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a portion of the Union Pacific Railroad line located in Juab Valley and running parallel to Highway 78/91. This location is referred to as Track 106, Station 133, crossing #806-789T. The portion of the railway that occurs within the current project area consists of two tracks and the remains of two stockyard buildings. According to a local informant, this was formerly the southern end of the rail line and the location of a large stock yard and rodeo facility. A literature review indicates that in 1878, the community of Chicken Creek was established as the southern terminus of the Utah Southern Railroad. The name of the community was changed to Juab a year later. In 1879, an extension beyond the Utah Southern was organized and was called the Utah Southern Railroad Extension. By June 1880, 137 miles extended south from Juab to Milford, then

west to Frisco (Carr and Edwards1989:151). Currently, the rail line here has two sets of tracks (an older set and a newer set) that separate and converge within the current project area. The old set of tracks are 2.5 in wide and occur just west of the newer ones, which are 3 in wide. Features A and B are the concrete footing and foundation remains of two structures associated with the stock yard.

Smithsonian Site No.: 42Jb1396
Temporary Site No.: MOAC 03-207b-47
Legal Description: T15S, R1W, Sec. 16
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a large dispersed lithic scatter located in a field grazed by cattle. The site area is bisected by several drainages. Most of the lithic debitage is pooled in sandy deflated, devegetated areas of the site. Artifacts include lithic debitage, five bifaces and one small side-notched projectile point fragment that may indicate a Late Prehistoric occupation.

Smithsonian Site No.: 42Jb1397
Temporary Site No.: MOAC 03-207b-38
Legal Description: T15S, R1W, Sec. 16
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a dispersed, high density lithic scatter located in a pasture in Juab Valley. Artifacts include lithic debitage, five bifaces, and one exhausted core. Two count grids were inventoried to provide a sample of lithic materials and stages represented at the site. No diagnostic artifacts were noted at the site.

Smithsonian Site No.: 42Jb1398
Temporary Site No.: MOAC 03-207b-46
Legal Description: T15S, R1W, Sec. 16
Land Status: Private
NRHP Evaluation: Not Eligible
Description: The site is a small lithic scatter located in a pasture in Juab Valley. Artifacts include lithic debitage (n=25) and a portable slab metate. No features or temporally diagnostic artifacts were noted on the site.

Smithsonian Site No.: 42Jb1399
Temporary Site No.: MOAC 03-207b-39
Legal Description: T15S, R1W, Secs. 9 and 16
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a low density lithic scatter located on relatively flat terrain on the floor of Juab Valley. Artifacts include lithic debitage, three tools, and four FCR fragments. The presence of a Rose Spring Series projectile point suggests a Late Prehistoric occupation for the site. The site exhibits potential for additional buried or obscured cultural materials.

Smithsonian Site No.: 42Jb1400
Temporary Site No.: MOAC 03-207b-40
Legal Description: T15S, R1W Sec. 9
Land Status: Private
NRHP Evaluation: Eligible
Description: The site is a large dispersed lithic scatter located on a rabbitbrush and sage covered knoll in the center of Juab Valley. Artifacts include lithic debitage, 12 tools, and 15 pieces of FCR (4 of gray quartzite and 11 of red quartzite). The presence of an Elko Series and a Pinto Series projectile point suggests an Archaic occupation for the site. The site exhibits potential for additional buried and obscured cultural materials.

Isolated Finds of Artifact

IF-A is located in the NE/NE/NE of Sec. 2, T21S R1W (UTM 423120E/4317625N). IF-A consists of remnants of two pieces of farming equipment located about 60 ft apart and next to a large plowed field. The southern-most piece of equipment appears to be an 8 ft x 6.5 ft wide box drag made of rough-cut 2 x 8s with 4 cross-members of rough-cut 2.5 x 8s. Each corner has a 1/4 in stock, 4 in wide x 2 ft long piece of steel bent 90 degrees to re-enforce each corner; 3/8 in bolts with square nuts hold it in place and it is held together with 20-penny nails. Several rusted metal components are also present. The center of the piece of equipment is filled with dirt, as if it was dragged to its present location and left. The second piece of equipment appears to be remnants of a possible hay sled bed measuring 15.5 ft long x 4 ft wide. It is constructed of 2.5 in x 8 in beams of old pine. The sides of the bed are detached from the bed and lying next to it. The sides of the sled bed are constructed of 1 x 8s, and it is held together with large carriage bolts. The tongue of the sled is also present and is made of pine and rusted metal components.

IF-B is located in the SE/NE/NE of Sec. 34, T19S, R1W (UTM 422646E/4325913N). It appears to be farming machinery remnants consisting of two 6 in diameter, 16 ft long pine log beams and five 6 in diameter, 5 ft long pine logs (possible cross-members), all lying on the ground in a "A"-like formation. The remains may represent a n abandoned rock sled. The longer beams are connected with randomly spaced ½ in carriage bolts that are 10 in long, with square nuts. The poles are saw-cut on the ends and axe-notched where the cross-beams connect. Two-strand flat barbed wire is located on the ends where the long beams meet. IF-B is located in an area vegetated with rabbitbrush and grasses, north of a dug-out pond.

IF-C is located in the NE/NW/SW of Sec. 27, T18S, R1W (UTM 421400E/4340704N). It consists of remnants of farming equipment (possibly an old mower) including an approximately 12 ft long wooden pole lying on the ground, with metal components attached at one end. A wheel and pulley system are also present. The components are scattered about a 13 ft x 13 ft area covered with low sagebrush, just west of a fence line.

IF-D is located in the SW/NW/NW of Sec. 34, T17S, R1W (UTM 420920E/4349318N). It is a fragment of a slab metate of tan sandstone lying next to a small drainage between two previously recorded sites (42Sp212 and 42Sp213). The metate is a thin slab measuring 30 cm x 19 cm x 3 cm thick, with a ground surface of 12 cm x 15 cm. Small areas of calcification occur around the edge of the metate. The ground surface is very lightly ground. It is located below a ridge, in an area covered with low sagebrush.

IF-E is located in the SE/SE/SE of Sec. 28, T17S, R1W (UTM 420727E/4349764N). It is a mano fragment of light pink sandstone with two well-ground surfaces. One facet is flat; the other is slightly convex. It measures 8.5 cm x 5.5 cm [IC] x 1.9 cm thick. The tool is located on the west side of the Sevier Bridge Reservoir, in an area vegetated with sage, juniper, and greasewood.

IF-F is located in the NW/SE/SE of Sec. 9, T17S, R1W (UTM 420370E/4354758N). It is a Stage V/VI biface fragment of semi-translucent white chert, located on the top of a low knoll in an area vegetated with low sagebrush. A snap fracture occurs across the midsection. It measures 4.2 cm [IC] x 4.4 cm x .8 thick.

IF-G is located in the SW/NE/NE of Sec. 16, T15S, R1W (UTM 420081E/4373523N). It consists of remnants of two pieces of farming equipment located in a 10 ft x 30 ft area. One piece may be a plow/furrough digger. Adjacent to this are approximately 6 pieces of deteriorating wood poles with nuts and bolts attached, and a 15' long rusted beam. About 10 feet west of these items is what appears to be a possible wooden gate door measuring 5' x 3', with two sets of hinges occurring on each side and three rusted cross bars bolted across the door to hold it together. IF-G is located in a grazed pasture with sparse low sagebrush.

IF-H is located in the SE/SE/NE of Sec. 33, T18S, R1W (UTM 421086E/4339181N). It consists of three flakes (a mottled tan and white chert flake fragment, a semi-translucent secondary flake, and a white chert flake fragment) and three mano fragments. One mano fragment is of gray sandstone, 6 cm [IC] x 5.8 cm [IC] x 3 cm [IC] thick with one smoothly ground surface with areas that have either eroded or been pecked. The other two mano fragments appear to be part of the same tool located about 1 meter apart. They are of grayish-pink quartzite and form an roundish-shaped tool with dimensions 10.5 cm x 11.5 cm [IC] x 5 cm thick. An area of light grinding/smoothness occurs on both sides. The artifacts are located in a field/cow pasture.

IF-I is located in the SW/NE/SE of Sec. 34, T21S, R1W (UTM 422868E/4309479N). It consists of a semi-translucent Stage VI biface (projectile point tip) that is finely worked. A snap fracture occurs at the midsection. A white and tan chert flake fragment is also present. The artifacts are located on a greasewood covered flat, south of the Sevier River.

IF-J is located in the SW/NE/SE of Sec. 10, T20S, R1W (UTM 422646E/4325914N). It contains a white chert broken flake, two white chert secondary flakes, a semi-translucent flake fragment, two white chert flake fragments and a semi-translucent Stage III white chert biface. All artifacts were located within a 10 m diameter area, on top of a low ridge in Sevier Valley.

IF-K is located in the SW/SE/NE of Sec. 10, T20S, R1W (UTM 422669E/4326266N). It contains three secondary and two primary white chert flakes, a mottled tan and gray piece of angular debris, a translucent flake fragment, a light gray secondary flake, and a small Stage V-VI biface fragment of black obsidian. The artifacts are located within an 8 meter diameter area, washing down a shallow drainage between two low ridges.

IF-L is located in the SW/NE/NE of Sec. 10, T20S, R1W (UTM 422717E/4326601N). It contains seven primary and secondary white chert flakes within a 10 m x 5 m area, located on the north slope of a low ridge.

Table 1. Archaeological Sites Within the Central Utah Railroad Project Area

Smithsonian No.	MOAC No.	Site Type	Eligibility
42Sv2342 Addendum	03-207b-6	Rocky Ford Canal	Eligible
42Sv2343 Addendum	03-207b-7	Vermillion Canal	Eligible
42Sv2344 Addendum	03-207b-37	Piute Canal	Eligible
42Sv2502 Addendum	03-207b-44	Denver and Rio Grande Western Railroad	Eligible
42Sv2737	03-207b-41	Lithic Scatter	Not Eligible
42Sv2738	03-207b-42	Farmstead	Eligible
42Sv2739	03-207b-1	Lithic Scatter	Eligible
42Sv2740	03-207b-2	Corral	Not Eligible
42Sv2741	03-207b-3	Hay Derrick	Not Eligible
42Sv2742	03-207b-4	Hay Derrick	Not Eligible
42Sv2743	03-207b-5	Corral	Not Eligible
42Sv2744	03-207b-45	Little Ditch	Not Eligible
42Sv2746	03-207b-C11	Lithic Scatter	Not Eligible
42Sv2747	03-207b-C12	Farmstead	Eligible
42Sv2748	03-207b-C10	Farm Equipment	Not Eligible
42Sv2749	03-207b-C8	Lithic Scatter	Not Eligible
42Sv2750	03-207b-C9	Lithic Scatter	Not Eligible
42Sv2751	03-207b-C1	Lithic Scatter	Not Eligible
42Sv2752	03-207b-C3	Historic Trash Scatter	Not Eligible
42Sp18 Addendum	03-207b-28	Prehistoric Temporary Camp	Eligible
42Sp19 Addendum	03-207b-29	Prehistoric Temporary Camp	Eligible
42Sp213 Addendum	03-207b-32	Prehistoric Temporary Camp	Eligible
42Sp570	03-207b-8	Lithic Scatter	Eligible

Smithsonian No.	MOAC No.	Site Type	Eligibility
42Sp571	03-207b-9	Lithic Scatter	Eligible
42Sp572	03-207b-37	Piute Canal	Eligible
42Sp573	03-207b-11	Lithic Scatter	Eligible
42Sp575	03-207b-12	Historic Trash Scatter	Not Eligible
42Sp579	03-207b-16	Historic Trash Scatter	Not Eligible
42Sp580	03-207b-17	Historic Trash Scatter	Not Eligible
42Sp581	03-207b-18	Lithic Scatter	Not Eligible
42Sp582	03-207b-19	Powerline Poles	Not Eligible
42Sp583	03-207b-20	Historic Trash Scatter	Not Eligible
42Sp584	03-207b-21	Lithic Scatter	Eligible
42Sp585	03-207b-22	Prehistoric Temporary Camp	Eligible
42Sp586	03-207b-M2	Prehistoric Temporary Camp	Eligible
42Sp587	03-207b-23	Prehistoric Temporary Camp	Eligible
42Sp588	03-207b-24	Lithic Scatter	Eligible
42Sp589	03-207b-25	Prehistoric Temporary Camp	Eligible
42Sp590	03-207b-M1	Prehistoric Temporary Camp	Eligible
42Sp591	03-207b-26	Prehistoric Temporary Camp	Eligible
42Sp592	03-207b-27	Lithic Scatter	Eligible
42Sp593	03-207b-30	Lithic Scatter	Eligible
42Sp594	03-207b-31	Prehistoric Habitation Site	Eligible
42Sp595	03-207b-33	Prehistoric Camp/Historic Trash	Eligible
42Sp596	03-207b-34	Lithic Scatter	Eligible
42Sp597	03-207b-35	Lithic Scatter/Historic Trash	Eligible
42Sp598	03-207b-36	Lithic Scatter	Eligible
42Sp603	03-207b-C6	Lithic Scatter	Not Eligible
42Sp604	03-207b-C7	Lithic Scatter	Eligible
42Jb1041	03-207b-48	Union Pacific Railroad	Eligible
42Jb1396	03-207b-47	Lithic Scatter	Eligible

Smithsonian No.	MOAC No.	Site Type	Eligibility
42Jb1397	03-207b-38	Lithic Scatter	Eligible
42Jb1398	03-207b-46	Lithic Scatter	Not Eligible
42Jb1399	03-207b-39	Lithic Scatter	Eligible
42Jb1400	03-207b-40	Lithic Scatter	Eligible

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:
>
> a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b)...are associated with the lives of persons significant to our past; or
>
> c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d)...have yielded or may be likely to yield information important in prehistory or history.

The inventory resulted in the documentation of 47 new archaeological sites (42Sv2737 through 42Sv2752, 42Sp570 through 42Sp573, 42Sp575, 42Sp579 through 42Sp598, 42Sp603, 42Sp604, and 42Jb1396 through 42Jb1400), re-documentation of seven previously recorded sites (42Sv2342, 42Sv2343, 42Sv2502, 42Sp18, 42Sp19, 42Sp213, and 42Jb1041), and visitation (no re-documentation) of one previously recorded site (42Sv2344). Thirty-five of the sites are evaluated as eligible to the NRHP.

Twenty five prehistoric sites are evaluated as eligible to the NRHP under Criterion D. These include fifteen lithic scatters (42Sv2739, 42Sp570, 42Sp571, 42Sp573, 42Sp584, 42Sp588, 42Sp592, 42Sp593, 42Sp596, 42Sp598, 42Sp604, 42Jb1396, 42Jb1397, 42Jb1399 and 42Jb1400), nine temporary camps (42Sp18, 42Sp19, 42Sp213, Sp585, Sp586, Sp587, Sp589 through Sp591), and one habitation site (42Sp594). Most of the prehistoric sites exhibit various stages of lithic reduction and stone tool production. Several sites (42Sp18, 42Sp213, 42Sp584, 42Sp587, 42Sp589, 42Sp592, 42Sp594, 42Jb1396, 42Jb1399, and 42Jb1400) contain diagnostic artifacts such as Rose Spring, McKean, Elko, and Humboldt projectile points evidencing Archaic, Fremont, and Late Prehistoric occupation of the area. The temporary camps (42Sp18, 42Sp585, 42Sp586, 42Sp587, 42Sp589, 42Sp590, 42Sp591, and 42Sp594) also contain one or more features, including hearths, FCR concentrations, and rock alignments. These sites have potential for yielding information about chronology, subsistence strategies, spatial patterning, settlement patterns, and technology.

Eight historic sites are recommended as eligible to the NRHP under Criteria A and D. Four of the sites (42Sv2342, 42Sv2343, 42Sv2344, and 42Sp572) are canals that are significant to the history of farming and subsistence activities in the area. These canals have all been previously recorded and include the Rocky Ford Canal (42Sv2342), the Vermillion Canal (42Sv2343), and the Piute Canal (previously recorded in Sevier County as 42Sv2344; recorded in Sanpete County

during this inventory as 42Sp572). Two of the eligible historic sites are farmsteads (42Sv2738 and 42Sv2747) that exhibit potential for additional buried cultural materials and therefore are eligible under Criterion D. The UPRR (42Jb1041) and D&RGW (42Sv2502) are significant to the economic development of the region and are recommended as eligible to the NRHP under Criterion A.

In addition, two dual component sites (42Sp595 and 42Sp597) were also evaluated as eligible to the NRHP under Criterion D. Site 42Sp595 contains a prehistoric temporary camp and historic trash scatter. The prehistoric component exhibits intact features with depth potential, spatial patterning, and diagnostic tools. Site 42Sp597 contains a lithic scatter and historic trash scatter. The prehistoric component demonstrates spatial patterning and potential for additional buried cultural materials.

Twenty sites are evaluated as not eligible to the NRHP. These include eight prehistoric sites (42Sv2737, 42Sv2746, 42Sv2749, 42Sv2750, 42Sv2751, 42Sp581, 42Sp603, and 42Jb1398). The prehistoric sites are all lithic scatters that contain a limited class of artifacts, no features, and little potential for additional buried cultural materials. The twelve ineligible historic sites include two corrals (42Sv2740 and 42Sv2743), two hay derricks (42Sv2741 and 42Sv2742), the Little Ditch canal (42Sv2744), one concentration of abandoned farm equipment (42Sv2748), five trash scatters (42Sv2752, 42Sp575, 42Sp579, 42Sp580, and 42Sp583), and a series of dismantled utility poles (42Sp582). These sites retain little structural integrity and/or little potential for providing valuable information on the history of the region.

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CULTURAL RESOURCE INVENTORY OF
THE CENTRAL UTAH RAILROAD PROJECT
IN SEVIER, SANPETE AND JUAB COUNTIES, UTAH

APPENDIX A:

SITE LOCATION DATA

CULTURAL RESOURCE INVENTORY OF
THE CENTRAL UTAH RAILROAD PROJECT
IN SEVIER, SANPETE AND JUAB COUNTIES, UTAH

APPENDIX B:

INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS) SITE FORMS

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